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BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

AN ILLUSTRATED MAGAZINE DEVOTED
CHIEFLY TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY M.B.E. F.Z.S. M.B.O.U.

ASSISTED BY

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AND

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Volume XXI

JUNE 1927 — MAY 1928



H. F. & G. WITHERBY

326 HIGH HOLBORN LONDON

1928
PURCHASED





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JUNE 1,
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Vol. XXI.
No. 1.



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JACK SNIPE ON ITS NEST.
Illustrating the effect of the stripes.
(Copyright: Ralph Chislett.)

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NOTES ON THE BREEDING OF THE JACK
SNIPE.BY
RALPH CHISLETT.

(Plate I.)

PERHAPS the most interesting event during our work in Swedish Lapland in 1926 was the discovery of the nest of a Jack Snipe (*Lymnocyptes minimus*). Whether the species occurs more frequently in other partially-thawed marshes of northern Europe I do not know; but in Lapland, Swedish and British ornithologists have hunted systematically for several successive seasons without finding a nest of the species, so that we were very fortunate to succeed on a first visit. The adult bird at the nest, so far as I am aware, has not been photographed before.

The wide marsh stretched for a number of miles between the birch-clad slopes of some low hills. From the hillsides, at intervals, open sheets of water of varying dimensions could be seen, and a fringe of the birch forest stretched almost down to a small, peaty pool. Through the woodland fringe a stream hurried, clear and cold with melted snow from the hill. Leaving the stream at a place where yellow globe-flowers grew in profusion, we followed the ridges of soft ground which intersected the marsh. Progress was impeded by scrub-willow, while hummocks of moss and mounds of crowberry and vaccinium overlay the peat foundation of the ridge, many of the hummocks being white with cloudberry blooms. Between the ridges in the marshy tracts grass grew thinly through the moss, and still more thinly in the centres, where our feet were brought up firmly at a depth of eighteen inches by the still frozen bottom. Later in the summer the marshes would probably be deeper.

As we walked, with eyes ranging between the ground ahead and the marshes to left and right, we were suddenly pulled up short by a curious, muffled noise, sounding curiously distant, yet near, at one moment almost clear, then suddenly confused. For half a minute the air was full of the sound and then all was still. What was it? Where was it? As we asked the questions the sound began again, a hollow, reedy, vibrant knocking. Frankly, for a time, I was puzzled—not for the first time since our arrival in Lapland.

When Woolley first heard the sound in 1853, on the day which also saw the first discovery of the nest of the species,



JACK SNIFE SITTING.
(Copyright : Ralph Chislett.)



he called it "the love-song of the Jack Snipe." Quite aptly, the sound has been compared to that of a horse galloping in the distance over a hard, hollow road. The source was always a puzzle and impossible to determine from sound alone. Sometimes the bird could be seen patrolling the air high above ; but at other times I heard the sound when no bird was visible, and the floating sound then seemed as likely to emanate from the ground as from anywhere else. Whether the sound is vocal, or produced by means similar to that by which the Common Snipe (*Capella g. gallinago*) produces its familiar "drumming", I do not know.

Not more than two hundred yards from the wood, a ridge sank and allowed the surplus water from one flattened area of grassy marsh to drain through to the next. On the north side of the trickle the ground rose slowly to the full height of the ridge again, perhaps a yard above the marsh-level. Midway up the little slope, on a dry bit of ground, a few stalks of scrub-birch partially shielded the Jack Snipe from view as it sat on the nest by the side of a cloudberry plant. Not that shelter was needed. The nest would never have been found had my foot not happened to drop within a few inches of it. Then away the bird flew, with a low, almost direct flight, without any sudden twists for some twenty yards, then down into the marsh.

Afterwards, when we knew the carefully-marked spot, and could approach cautiously, we generally found the bird sitting, head and bill motionless in the grass, but its eyes always observant. At leisure we could note the dark-tipped yellow bill ; the frilled, creamy stripes ; and interspaces mystically written in gold and bronze, glossed over with green, bronze and purple ; and the dark centre of the crown.

First to find the bird, even at two yards' range, required careful sight. Never once, even when I was hidden from view, did the bird fully raise its head. When flushed it disappeared from view into the marsh and was not seen again until within a few feet of the nest. Once, when spotted a couple of yards away, it covered that short distance a foot at a time, crouching down for a few seconds between each very short journey ; then, still crouching, it covered the eggs and remained motionless.

The hollow of the nest was deep, so that the eggs almost stood on their points. The spots on the eggs were smaller and rounder and distributed more evenly than is the case with average eggs of the Common Snipe. Until I had seen the bird upon them the identity of the eggs remained uncertain.

Such an exceedingly cautious bird provided little entertainment to the occupant of a hiding-tent, apart from the great interest of observing such a rarity. Even different sitting positions were mostly seen at different visits. But to make up for the lack of excitement without, uninvited guests forced their attentions upon me within. A cold day was comparatively comfortable on the marsh, mosquitoes then lay low. But the sun engendered a surprising heat; and then the interior of the tent droned merrily, until tobacco had done its beneficent work. Peace followed for as long as I continued to smoke and for a few minutes afterwards.

The nest was found on June 12th, 1926, and it then contained four eggs. The last time I inspected it was on July 6th when the eggs were cracking at their larger ends. But our long journey south was due to begin that same evening, so that the opportunity to depict and describe nestling Jack Snipes, which even in the *Practical Handbook* are given as "not examined," had regretfully to be abandoned.

We heard the species on another large marsh in Lapland; but on the marsh we principally visited I believe there was only one pair of Jack Snipes breeding. The bird is too well known for its habits in this country in winter to need description.

A NOTE ON SONG AND DISPLAY OF KINGFISHERS.

BY

W. MURRAY MARSDEN.

It is ten years since the following observations were made. I have waited in the hope of renewing them or hearing of their confirmation by others, as they are not, I think, paralleled in such British authorities as I have been able to consult.

During the hard winter of 1916-17 I was stationed at South Camp, Ripon, where along the little river Skell, with its suitable banks for their nesting, Kingfishers (*Alcedo a. ispida*) were rather numerous.

Late in February or early in March, 1917, on a sunny forenoon, my occasions took me down to the right bank of the Skell and I heard a bird-song which was new to me. Turning slightly up-stream in its direction, I saw that the sound came from one, and then from two Kingfishers who were manœuvring round on the wing, in rather small circles—say 15-20 yards diameter—not interfering with each other, but singing continuously after the manner of Dippers on the wing, and “displaying” in their flight after the manner of Greenfinches, with something of the same hesitancy and faltering—a performance entirely different from the Kingfishers’ usual direct rapid movement. The song itself had the “sweet trilling” character which Mr. T. A. Coward describes, also his “modulated repetition of many whistles,” but even allowing for the circumstance that its utterance was two-fold, the song was much more rapturous, varied and emulative than that description suggests. An amalgam of Dipper and Greenfinch songs, in fact, would come nearer the sounds I heard for character, pitch and tone. The birds seemed to sing continuously as they flew, but from time to time one—never, I think, both—would go down into a clump of leafless willows on the opposite bank, where I eventually suspected the presence of a hen bird, but this I had not time to confirm. The bushes were, however, undoubtedly the centre of the manœuvres, and the birds, when they visited them, did not sit on outside branches but disappeared into the middle.

To me the performance seemed the more astonishing in that at the point of the river where it was taking place the banks were quite low—at the time only a foot or so above the stream which was not particularly swollen.

MANX ORNITHOLOGICAL NOTES, 1925 AND 1926.

BY

P. G. RALFE.

NOT very much of ornithological interest has been observed in Man during these two years. But the Red-necked Phalarope has been added to our list, and the observations of the Blackcap and Whinchat as nesting are new. The White and Yellow Wagtails continue to be noticed, the former in considerable, the latter in small numbers. There are a few reports of the Garden-Warbler, but no nest seems to have been found. The Great Black-backed Gull appears still to increase as a breeding species.

RAVEN (*Corvus c. corax*).—On October 21st, 1926, Mr. F. S. Graves saw twenty-six Ravens fly in from the sea at Peel in a loose flock. Over the bay, six broke away and flew west over Peel Hill, while the rest went inland to the eastward.

CARRION × HOODED CROW (*Corvus c. corone* × *cornix*).—In 1925 the mixed pair (see *B.B.*, Vol. XIX., p. 10) again nested in the same locality as in 1923 and 1924, and Mr. Graves obtained one of the hybrid young for the Manx Museum.

In 1926, however, the birds were not seen on Peel Hill, but on the opposite coast of the Island; at Gob ny Garvain (or Ghaauin) Mr. G. P. Cookson found a similar pair nesting, on April 24th the nest having four eggs. From the behaviour of the birds, Mr. Cookson thought that the Carrion-Crow, which was obviously sitting, was the hen. The eggs appeared to him very small, their length varying from $1\frac{1}{2}$ to $1\frac{5}{8}$ in.

Col. Madoc saw two Carrion-Crows in Kirby Park, October 22nd, 1926.

In March, 1926, Mr. W. S. Kennedy saw at Onchan a pair of Crows: one a Grey Crow, the other he considered a hybrid with the Carrion.

BLACKCAP (*Sylvia a. atricapilla*).—On various dates in the summer of 1926, Mr. F. S. Graves saw and heard a male Blackcap in the garden of Mr. Corris, schoolmaster, Ballabeg. It sang from a tree overlooking a thick tangle of gooseberry bushes, and though, owing to the nature of the cover, no nest could be identified, there could be no doubt that there was one in the near neighbourhood.

Col. Madoc saw birds several times in 1926, in one case early in July a pair feeding young in a garden on the outskirts of Douglas.

MISTLE-THRUSH (*Turdus v. viscivorus*).—In May, 1925, Col. Madoc found a nest in the centre of a gorse bush.

To this species probably belonged the nest which in the same year was placed on an open gravestone in the churchyard of Kirk Maughold. It was reported to me by Mr. J. A. Fraser and Mr. G. B. Cowen; the latter photographed it with the sitting bird. On May 17th it had four eggs, but was soon after forsaken.

WHINCHAT (*Saxicola r. rubetra*).—On May 2nd, 1926, Mr. F. S. Graves saw four (male and female) at Glenfaba, near Peel.

Col. Madoc observed the species three times during the same summer, in one case two pairs, one of which was feeding young.

CREEPER (*Certhia familiaris*).—A specimen was taken at the Point of Ayre Light on August 10th, 1926, and came into possession of Col. Madoc. Unfortunately, the bird could not be preserved, and its subspecific determination must remain doubtful.

SWALLOW (*Hirundo r. rustica*).—Swallows were seen as late as November 10th in 1925, and November 11th and 14th in 1926.

HEN-HARRIER (*Circus c. cyaneus*).—Mr. T. A. Corlett, Jnr., obtained a female specimen in the north of the Island in November, 1926, and presented it to the Manx Museum. On April 27th, 1926, Col. Madoc saw a male in Glen Helen.

RED-NECKED PHALAROPE (*Phalaropus lobatus*).—About September 20th, 1926, a specimen was obtained at the Point of Ayre and presented by Col. Madoc to the Manx Museum.

LAPWING (*Vanellus vanellus*).—During the winter of 1925-26, unusually large flocks of Lapwing appeared in the Island, with smaller numbers of Golden Plover. They were observed very abundantly at the Point of Ayre Light in January, February and March, 1926.

COMMON SANDPIPER (*Tringa hypoleucos*).—On February 28th, 1925, I observed one at Cass-ny-Hawin, a favourite locality of the species on migration.

TERN (*Sterna hirundo* or *macrura*).—On February 11th, 1926, Mr. F. S. Graves saw two medium-sized Terns in Peel Bay.

GLAUCOUS GULL (*Larus hyperboreus*).—Immature specimen at Peel, January 22nd, 1925 (see *B.B.*, Vol. XIX., p. 29).

STORM-PETREL (*Thalassidroma pelagica*).—On January 29th, 1926, one was seen off Fort Island by Col. Madoc in very stormy weather.

TURTLE-DOVE (*Streptopelia t. turtur*).—On September 13th, 1926, Capt. Crellin obtained an immature specimen at Ballamooar, Jurby.

THE STIMULUS TO MIGRATION.*

MR. WILLIAM ROWAN of the University of Alberta has made an interesting contribution to the study of migration from the theoretical standpoint in this paper, and if the new experimental work which he describes can be successfully carried further it may well lead to a substantial addition to existing knowledge of the subject. He is here solely concerned with one question, namely, the nature of the immediate stimuli to migration, the seasonally recurring factors which arouse the migration instinct to activity. He is not dealing with the advantages which migration confers, nor with the causes which implanted the instinct in the race, but only with those factors which, so to speak, actually pull the trigger.

Food shortage cannot, by itself, be the stimulus to autumn migration. Many birds migrate before this can have effect, and the factor seems to be more variable from year to year than are the phenomena of migration. Mr. Rowan, further, quotes interesting evidence of failure to migrate under stress of starvation in the case of birds which had lingered in the north until after the proper migration season. Low temperature, for analogous reasons, likewise cannot be the stimulus. Barometric pressure has perhaps more influence than the author is willing to admit, but he is on sure ground in saying that this cannot be the primary stimulus, seeing that it is effective only near the appropriate time, *i.e.*, when a state of readiness to depart has already been evoked. (The late "weather movements" occurring in some cases in severe winters are, perhaps, to be regarded as different in nature from regular migration.)

The notable regularity of migration suggests that it may be related to the most regular physical phenomenon in the cycle of the seasons, that is to the changes in the length of daylight. Mr. Rowan thus joins those authors who seek the stimulus to migration in the shortening daylight in autumn, and in the lengthening daylight in spring. It is probably not a relevant objection that a bird migrating before the autumnal equinox is flying towards still shorter daylight: the stimulus of shortening daylight has had its effect in causing departure, one may argue, and it is not supposed that it is a factor controlling direction.

* "On Photoperiodism, Reproductive Periodicity, and the Annual Migrations of Birds and certain Fishes." By William Rowan. *Proc. Boston Society of Natural History*, 1926, 38, 147-189.

A more serious objection is that northern birds wintering in the Southern Hemisphere are subject, before their northward flight, to shortening instead of to lengthening daylight, and that those wintering on the equator are subject to no stimulus at all of this kind. This suggests that "photoperiodism" is not so much a direct stimulus operating at the moment, but a factor which determines the regularity of the annual physiological cycle through which the bird passes; the rhythm may be fixed without the factor being always operative. Reproductive periodicity is another symptom of this cycle, and the suggestion thus arises that the physiological control of the whole annual series of events may lie in the condition of the sexual organs. Some theoretical support for the application of this view to migration phenomena is to be found in the incomplete migrations of some immature birds.

These various speculations are not new, but Mr. Rowan produces cogent evidence and marshals the arguments with force. Chief interest, however, attaches to his own attempt to put the matter to experimental proof. Briefly, his method has been to try the effect of artificial light upon Juncos (*Junco hyemalis hyemalis*) captured in Alberta on their southward migration. The birds were kept in two outdoor aviaries. Being well supplied with food, the birds were found to thrive despite the great severity of a winter to which they are normally strangers. One of the aviaries was equipped with two 50-watt electric bulbs, by means of which the days were artificially lengthened while those in the control aviary were naturally decreasing. The effect of this treatment was to produce a premature recrudescence in the gonads in the experimental birds, as shown by the comparative examination of specimens taken periodically from among them and from among the controls. It is to be noted that the bulbs used were of ordinary glass, so that it is not a question of ultra-violet radiation.

The further result, and that of the greatest interest as regards migration, is that birds liberated when their gonads are at their winter minimum do not migrate, but remain close at hand and are usually soon recaptured. The time has passed and the migration instinct, although previously thwarted, has fallen into abeyance. On the other hand, experimental birds, similarly liberated in mid-winter but with gonads in a state more appropriate to spring, have disappeared; although ringed, they have, unfortunately, not been traced as yet in any instance. The suggestion is that they performed

some sort of journey, the migration instinct being brought into operation at an inappropriate season by means of an interference with the annual physiological cycle through the influence of abnormal light conditions.

The evidence on this last point is as yet slight and must not be taken as having conclusive value. It is, nevertheless, suggestive, and Mr. Rowan's further attempts will be followed with much interest. If he can by known means control the awakening of the migration instinct, he will have gone far towards elucidating the nature of the stimuli which are ordinarily operative. It is a new line of attack upon the problems of bird-migration, and one which with patient work may yield results of real novelty and importance.

A.L.T.

NOTES

HENRY WHITELY.

IN Mr. Gladstone's interesting paper (*antea*, Vol. XX., pp. 290-3), no mention is made of another claim to notice on the part of Henry Whitely. The Mediterranean Black-headed Gull (*Larus melanocephalus*) was added to the British List on the strength of a specimen sold by Whitely to Mr. G. R. Gray for the British Museum. It was shot by a waterman near Barking Creek in January, 1866, and brought to Whitely, who took it to Gray. At the time, some doubt was expressed by Seebohm and others as to the authenticity of the record, but since that date at least seven others have been obtained, and others reported.

F. C. R. JOURDAIN.

RAVENS BREEDING IN TREES IN DEVON.

IN 1900 in the first week in May I found Ravens (*Corvus c. corax*) breeding in a Scotch fir with nearly fully-fledged young. This nesting site was used till 1918, when a visitor to the neighbourhood shot both the old birds; since then I have had no opportunity to see whether the site is still occupied.

Ravens bred in a clump of Scotch firs within two miles of my house till two years ago, when the trees were felled.

Birds, singly and in pairs, are commonly seen; I have long ceased to record them, though we are fifty miles from the coast; and I have seen as many as six together while shooting in the autumn. So far, I have failed to find any other breeding locality in this neighbourhood.

OWEN WYNNE.

TREE-NESTING RAVENS IN SOUTH WALES AND HEREFORDSHIRE.

WITH regard to the reference concerning Ravens (*Corvus c. corax*) nesting in trees (*antea*, Vol. XX., p. 278), it is perhaps worth noting that tree-nesting Ravens are becoming comparatively common in South Wales. I know of two nests personally, both in Scots firs. I also know of a nest in a larch in Herefordshire. In addition to these I have heard of several more, none of which I have visited.

H. A. GILBERT.

HOODED CROW IN MONMOUTHSHIRE.

THE first Hooded Crow (*Corvus c. cornix*) that I had heard of in Monmouthshire was shot on October 12th, 1925

(*vide antea*, Vol. XIX., page 150), and I now have to record a second bird seen by Mr. A. W. Ecutt on February 6th, 1927.

The bird was flying up the River Usk, near the town of Newport, mobbed by three or four Rooks. Ecutt is a taxidermist in the town, and mounted the first specimen of the bird for the museum.

He tells me he was only about fifty yards from the bird, and that there can be no mistake in the identification.

R. C. BANKS.

RESTRICTED INTERVAL BETWEEN FIRST BROOD AND SECOND NESTING OF MISTLE-THRUSH.

DURING a short stay at my son's house in the Ratlinghope valley, Shropshire, I found a pair of Mistle-Thrushes (*Turdus viscivorus*) with young in a spruce-fir in the garden. In the early morning of April 18th I noticed one of the young had left the nest (an early date I considered for that altitude), but not strong enough on the wing to escape my temporary capture. By breakfast time on the morrow I was surprised to see that the hen bird had the greater part of the outer structure of a new nest built upon the overhanging branch of a poplar tree, close to the house, and it was busily shaping and adding to it at frequent intervals during the day. I could not quite satisfy myself that both the parent birds were feeding the young or if there was more than one young one in evidence. Frequent coition took place in the late afternoon of the same day.

J. S. ELLIOTT.

[This is an interesting case, but individual birds vary considerably in this respect. A nest under observation in S. Derbyshire contained five eggs on April 29th. These were safely hatched off and the young left the nest about the end of May, but the nest did not contain eggs again until June 24th. —F. C. R. JOURDAIN.]

PEREGRINE FALCONS IN BEDFORDSHIRE.

ON February 21st, 1926, a Peregrine Falcon (*Falco peregrinus*), which from its size was evidently a female, was observed by my wife and me as it was passing in rapid flight down the Ouse Valley, at Tempsford. It was flying quite low and seemed to be but a passage bird.

On March 19th, 1927, an immature male in its first moult was killed at Shefford Hardwick. It was not preserved but its remains were sent to me for identification.

Although possibly never a year passes but that this Falcon visits Bedfordshire, its recorded occurrences are comparatively few in number and it is now-a-days apparently less frequent than in years past, though this is not to say that it was ever common. It has occurred from August to April, but more frequently from November to February.

The late Mr. A. S. Covington, whose experience as the best known of local taxidermists covered considerably upwards of half a century, told me that twenty-five county-killed specimens had been entrusted to him, three only of which were in the fully adult plumage. Mr. T. Cane, a noted bird-stuffer of Luton, had three in his collection which was dispersed at his death, and these he informed me were all locally-killed birds.

Mr. H. Pestell of Elstow, which is a locality evidently favoured by this Falcon, tells me that in the past thirty-five years he has personally seen six in all in that parish, and two in addition at Bromham and Ampthill.

Of the following, some of which are included amongst the above, I have details :—

Biddenham	—	Nov. 1851	Stevington	—	Nov. 1899
Ickwell Bury	—	Feb. 1879	Southill	—	Jan. 1900
Great Barford	—	Nov. 1879	Wilshamstead	—	Feb. 1887
„	„	—	Holme	—	Jan. 1892
Colmworth	—	Apr. 1880	Colesden	—	1892
Cardington	—	Oct. 1880	Wooton	—	Nov. 1893
„	—	about 1888	Tingrith	—	Dec. 1894
„	—	Jan. 1905	Broom	—	Feb. 1895
Warden Gt. Wood	Nov. 1881		Melchbourne	—	Nov. 1895
Felmersham	—	Mar. 1882	„	—	Jan. 1921
Elstow	—	Aug. 1885	Goldington	—	Dec. 1895
„	—	Dec. 1891	Ravensden	—	Dec. 1900
„	—	Nov. 1892	Renhold	—	Dec. 1907
„	—	Nov. 1897	Flitwick	—	Sept. 1913
„	—	Jan. 1898	Harrold—two	—	Feb. 1921
„	—	Dec. 1899	Tempsford	—	Apr. 1921
„	—	Nov. 1900	Cranfield	—	Nov. 1923
„	—	Nov. 1921	Marston	—	Sept. 1925

J. S. ELLIOTT.

HARRIERS AND BUZZARDS IN DEVON.

IN March, 1923, a male Hen-Harrier (*Circus c. cyaneus*) in full plumage was shot near Crediton and is now in the Exeter Museum.

On August 19th, 1925, a Harrier flew slowly up the pool I was fishing and passed within a few yards; two days later my daughter and I watched another not far from the same spot, and possibly the same bird, quartering a grass field for several minutes. Both these birds were in female plumage, the second showing a very strong rufous colouring on its under-side as it turned over in the wind. These were probably Montagu's Harriers (*C. pygargus*).

In June, 1926, a friend told me he also saw a Harrier, sex not specified, in much the same locality.

On March 1st, 1927, my son and I saw nine Buzzards (*Buteo b. buteo*) in the air together; they gradually collected till the nine were circling directly over us. They were then joined by a Peregrine (*Falco p. peregrinus*) and the ten birds wheeled round together for a considerable time without disagreement of any kind; it was quite a wonderful sight.

Only once before (April, 1926) have I seen in spring time a number together approaching this and then there were eight together. On March 24th of this year there were six together over this house.

It is a pleasure to be able to record these numbers, as out of six eyries examined, over rather a wide area last spring, only two broods got away; three being plundered and one young brood destroyed, and on the whole the bird has been rather severely treated in the past few years.

OWEN WYNNE.

PROBABLE MARSH-HARRIER IN HAMPSHIRE.

ON April 4th, 1922, I saw a Harrier in the New Forest which appeared to be a female Marsh-Harrier (*Circus æ. æruginosus*). I first saw it at a distance of about sixty yards with a very good glass. It appeared bright reddish-brown all over, with paler shoulders contrasted with the dark primaries and a paler rufous patch on the upper tail-coverts. There was no barring on the tail, which was conspicuous when spread as the bird rose to pass over a telegraph wire. The date seems to be a late one.

M. C. W. DILKE.

PROBABLE GOSHAWK IN DEVON.

ON April 6th, 1927, near Lynton, north Devon, my father and I saw a bird which had every appearance of being a

Goshawk (*Accipiter gentilis*). It flew out of a stunted oak about twenty yards ahead of us on a steep, wooded hillside sloping down to the sea. After a short flight it turned and passed below and within fifty yards of us, so that we were able to get a good view of it through glasses before it disappeared round the hill. The bird was very large, with short, broad wings and long tail, and had a fast and regular flight. Its upper-parts appeared uniform dark brown. In both shape and flight it was like a huge Sparrow-Hawk, and this was particularly brought out as we had opportunities at Lynton for comparison with Peregrine and Buzzard as well as the commoner birds of prey. Neither of us had seen a Goshawk before, but the distinctive features I have described were clearly seen by both of us, and these are unlike any British Hawk other than the Goshawk. P. K. CHANCE.

SPARROW-HAWK CAPTURING A BAT.

WHILST fishing a salmon-pool on the River Lledr, N. Wales, at 9 p.m. on May 9th, 1917, I was much interested to observe a male Sparrow-Hawk (*Accipiter nisus*) fly into an oak tree overlooking the pool, and presently dash amongst half a dozen bats that were hawking over the surface of the water, and after a number of lightning twists and turns seize one and carry it away. The remaining bats dispersed at the time of the attack, mounting high into the sky, but in a little while returned and resumed their hawking over the surface of the pool. M. V. WENNER.

DUCKS AT NORTH WORCESTERSHIRE RESERVOIRS.

It is some time since I published any records for the north Worcestershire reservoirs. The following notes may be of interest.

During the early months of 1926, a party of Goosanders (*Mergus m. merganser*) visited the Upper Bittell reservoir. Their numbers varied very much from week to week; on January 7th there were eight together, and one that for some reason kept to itself. On the 14th there were none. On the 1st, when most of the water was frozen, one bird was flying round about and settling on the ice. On the 28th there were seven together, and on February 11th twelve. A week later there were apparently not more than two; on March 4th one; on the 11th one; on the 25th none. I believe more than twelve were recorded in the *Field* by another observer seen on some date in February, including one drake; I

saw no drakes. It would be interesting to discover how far such birds wander during the winter. Do they go backwards and forwards between these waters and some of the large pools in Staffordshire—at least thirty miles away—or is there some nearer pool that they visit?

Curiously enough a single female Goosander, the only one I have seen during the past winter, stayed for three months (January 13th to April 13th) without apparently leaving the reservoir. Twice, at least, it allowed me to approach within twenty yards; on January 20th, especially, when swarms of Pochard, Tufted Duck and Coots were crowded together in a small strip of unfrozen water, the Goosander was very tame, and made some fierce thrusts at Coots, occasionally uttering a hoarse cry.

Apart from the exceptional number of birds on January 20th, this winter the bird population of the reservoirs has remained unusually stable. The number of Pochard (*Nyroca f. ferina*) has varied a good deal, but the other ducks hardly changed at all after the middle of January until their departure. As a rule, Goldeneye (*Bucephala c. clangula*) appear in twos or threes during November and December, but after mid-January, at the latest, they disappear, though single individuals sometimes reappear in late March or April. This year was exceptional. There were single birds in various plumages until after Christmas. On January 20th there were four, one an adult drake, and these four stayed, and could usually be seen on the water together, sometimes on the Upper Bittell, sometimes on the Lower, until April 13th; on April 9th and 13th they were accompanied by a fifth bird. On February 24th, a gloomy day with cold showers and a north-east wind, they were going through the courting performance, the adult drake frequently throwing his head back on to his tail, and two others, presumably both young drakes, doing the same occasionally, and the one that appeared to be a duck also took some part in the performance, at least to the extent of stretching its neck upwards with vertical beak, and all four swam after each other, the drake usually leading. On later dates, in spite of more genial weather, I did not see the performance repeated.

Other Ducks that have been observed at the reservoir in the past two years, since the Long-tailed Duck already recorded (Vol. XIX., p. 236), were an adult drake Smew (*Mergus albellus*) seen by Messrs. F. R. Barlow and J. D. Wood on December 19th, 1925; an immature Smew seen by myself on February 18th, 1926; a Gadwall (*Anas strepera*)

seen by Messrs. Barlow and Wood on January 9th, 1926, and one seen by myself, standing on the ice amongst a crowd of Mallard and Wigeon, on January 20th, 1927, and five Common Scoters (*Oidemia n. nigra*), four of them apparently drakes, but the light was very bad, on April 9th, 1927. On November 11th, 1926, a single Diver was swimming in the middle of the Upper Bittell reservoir. It refused to come anywhere near the bank while I was watching it, but I think it was a Red-throated Diver (*Colymbus stellatus*).

H. G. ALEXANDER.

LONG-TAILED DUCKS IN CO. DONEGAL IN MAY.

FROM May 7th till 9th, 1927, I observed eight Long-tailed Ducks (*Clangula hyemalis*) feeding on the outskirts of the rocks under the Great Northern Railway Hotel at Bundoran. At least four were drakes, which displayed in courtship, erecting their tails, at times perpendicularly.

HENRY B. RATHBORNE.

WOOD-PIGEON WITH CLUTCH OF THREE.

ON April 12th, 1927, we found a nest of the Wood-Pigeon (*Columba palumbus*) about twenty feet from the ground in a Douglas fir, near Dumfries. It contained two eggs as well as one newly hatched bird.

W. & A. B. DUNCAN.

[About half a dozen cases are on record of three eggs or young in the nest of the Wood-Pigeon (*cf. antea*, Vol. IV., p. 155; *Field*, 19, xi., 1904; *Vict. Hist. of Rutland*, etc.); while cases of four eggs or young have been recorded about three times (*cf. Zool.*, 1889, p. 436; *antea*, *loc. cit.*, etc.), but the latter are probably either first and second layings of one hen in the same nest or the produce of two hens.—F. C. R. JOURDAIN.]

WOOD-PIGEON DIPHTHERIA IN PERTHSHIRE.

HEARING that many Wood-Pigeons (*Columba palumbus*) were dying at Moncreiffe, Bridge-of-Earn, in February and March, 1927, I collected several, and brought them to Perth Museum. The tongues and throats proved to be septic and greatly inflamed; in some cases inflammation had practically closed the throat, which agrees with the keepers' accounts of seeing Pigeons sitting gasping in trees, then falling dead, apparently from suffocation. A swab of the throats, when submitted to the diphtheria test at the local infirmary, gave a positive

reaction ; this, of course, would not mean that the bacillus was the same as human diphtheria, but merely of a similar nature. SCONE.

[For the nature of the disease and distribution of former epidemics see C. B. Ticehurst, Vol. I., p. 243 ; Vol. II., p. 69 ; Vol. III., p. 213 ; Vol. IV., p. 304.—EDS.]

RARE BIRDS IN FAIR ISLE.—Surgeon Rear-Admiral J. H. Stenhouse records (*Scot. Nat.*, 1927, pp. 53-4) the occurrence of the following scarce visitors to Fair Isle in the autumn of 1926 :—

SHORT-TOED LARK (*Calandrella b. brachydactyla*).—A female was obtained on October 19th.

EVERSMANN'S WARBLER (*Phylloscopus b. borealis*).—One on September 27th. This is the seventh recorded British occurrence.

YELLOW-BROWED WARBLER (*Ph. h. præmum*).—Three were observed between September 8th and October 6th.

LANCEOLATED WARBLER (*Locustella lanceolata*).—One on September 26th. This is the fifth recorded occurrence in Great Britain.

BARRED WARBLER (*Sylvia n. nisoria*).—A female on August 13th and males on 14th and 27th.

NESTLING PLUMAGES OF WOODCHAT SHRIKE, WESTERN BLACK-EARED WHEATEAR AND ALPINE ACCENTOR.—In a paper on "The Summer Avifauna of the Pyrénées Orientales" (*Ibis*, 1927, pp. 284-310), Dr. C. B. Ticehurst and Mr. Hugh Whistler describe the nestling plumage of the following species that are not included in *The Practical Handbook* :—

WOODCHAT SHRIKE (*Lanius s. senator*). Vol. I., p. 268. The authors state that the newly-hatched young have no down (*cf.* H. F. Witherby's remarks, *B.B.*, Vol. XIX, p. 69, and Collingwood Ingram, *Ibis*, 1920, p. 879).

WESTERN BLACK-EARED WHEATEAR (*Enanthe h. hispanica*). Vol. I., p. 435. The down-plumage described agrees with that in *The Practical Handbook*, taken from a partially feathered skin, but the coloration of the soft parts is added : gape yellow, flanges white, no tongue-spots.

ALPINE ACCENTOR (*Prunella c. collaris*). Vol. I., p. 485. Down, dark grey, long and scanty ; supra-orbital, occipital, humeral, spinal, alar and femoral tracts ; two black oval tongue-spots ; flanges white.

CONTINENTAL BLUE TIT AT FAIR ISLE.—A Blue Tit secured by Mr. G. Stout on Fair Isle on October 20th, 1926, has been determined by Rear-Admiral Stenhouse and Dr. Hartert as of the Continental form (*Parus c. cæruleus*) (*Scot. Nat.*, 1926, p. 168). This is the second identified example of this form for Scotland and the third for Great Britain.

WILLOW-TIT IN CLYDE AREA.—Mr. J. Paterson contributes a valuable article to the *Scottish Naturalist* (1927, pp. 17-23) on the distribution of *Parus a. kleinschmidti* in the Clyde area. This is supplementary to Mr. Stewart's article, to which we have already drawn attention (*antea*, Vol. XX., p. 252), about the bird in Lanarkshire.

SIBERIAN LESSER WHITETHROAT IN INNER HEBRIDES.—Mr. J. Bain records (*Scot. Nat.*, 1927, p. 44) that on October 21st, 1926, he procured on Hyskeir a Lesser Whitethroat, which proved on examination at the Royal Scottish Museum to be an example of *Sylvia c. affinis*. This eastern form has hitherto only been recorded from Fair Isle.

NIGHT-HERON IN LANARKSHIRE.—Mr. J. Paterson records (*Scot. Nat.*, 1927, p. 14) that an immature *Nycticorax nycticorax* frequented the Botanic Gardens at Glasgow from early November to the middle of December, 1926.

WHOOPER SWANS IN GLOUCESTERSHIRE IN APRIL.—Mr. L. J. Vernal informs us that Mr. J. M. Lade observed five Whoopers (*Cygnus cygnus*) amongst some Mute Swans in flooded meadows bordering the River Severn near Tewkesbury on April 9th, 1927. Mr. Vernal saw the Whoopers there on April 14th and 16th, after which they disappeared.

GARGANEY BREEDING IN YORKSHIRE.—In his annual report for 1926 to the Yorkshire Naturalists' Union for the West Riding, Mr. H. B. Booth states (*Nat.*, 1927, p. 17) that on June 5th he saw on a smallish pool on a moor near Clapham a female Garganey (*Anas querquedula*) with a brood of five or six ducklings. On the same pool were two Common Teal, each with its brood.

GOLDENEYES IN NORTH DERBYSHIRE.—With reference to Dr. W. Shipton's note on this subject (*antea*, Vol. XX., p. 295), Mr. A. W. Boyd writes to express his surprise that the bird has been so rarely recorded from north Derbyshire, as it occurs frequently on reservoirs in other parts of the Pennines within a few miles. Mr. Boyd adds that he saw one on the Derwent Valley water-works in north Derbyshire on January 15th, 1921.

FÆROE SNIPE IN THE OUTER HEBRIDES.—The Misses L. J. Rintoul and E. V. Baxter note (*Scot. Nat.*, 1927, p. 24) that among some Snipe sent from North Uist in October, 1926, one proved on comparison to be an example of *Capella g. færoensis*.



LETTERS



SWIMMING POWERS OF NESTLING WADERS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Major M. Portal's enquiry (Vol. XX., p. 256), I can say that the nestlings of almost all our Limicolæ are perfect swimmers.

In the moors and fens of Noord-Brabant and Friesland, I have, more than once, found nests of Curlew, Godwit, Redshank and Common Snipe on very small islets (sometimes mere tussocks of grass or sedge) in greater or smaller pools of shallow water. The situation was always such that the newly-hatched young could only leave the nest through the air (carried by their parents) or through the water.

I have once seen a Woodcock carrying its young, and am aware that it is said that Lapwings would do the same, but I could (and can) not believe that the long legs of Curlew and Godwit can be used for such work. It seemed to me that the only way for the nestlings to cross the water was by swimming. I therefore carried a two or three days' old Ruff to a broad ditch and put it on the surface of the water. It was not in the least frightened, but floated like a duckling and paddled straight and firmly to the opposite bank.

I tried the same experiment with nestlings of all our waders (Lapwing, Godwit, Redshank, Oystercatcher, Curlew, Common Snipe and even Golden Plover). All were able to cross, without difficulty, from 4 to 10 yards of water (the breadth of the different ditches) and doubtless over greater distances, but I did not continue my trials in this direction.

TJEERD. GS. DE VRIES.

AMSTERDAM, *April 19th*, 1927.

REVIEWS

Transactions of the Norfolk and Norwich Naturalists' Society, 1925-6.
Vol. XII. Part II.

THIS issue of the *Transactions* of this well-known Naturalists' Society contains several papers of special interest to ornithologists. The President, Dr. E. Hanbury Hankin, gives an interesting address on the "Evolution of flying animals." Miss E. L. Turner contributes a paper on "Bird migration at Scolt Head in the autumns of 1924 and 1925," in which there are some observations of considerable value. Lord William Percy's article on the "Eclipse plumage in its bearing on the life-history of the Ducks" deserves careful attention. The author argues, with good reason, that the protective coloration supposed to be afforded by the eclipse plumage is not needed, and is indeed often not provided; that while all ducks become equally flightless, a very large proportion have no eclipse plumage in the sense that their distinctive colour-pattern is eclipsed (this applies chiefly to non-Palæarctic species). Lord William states that whenever the colour-pattern of the sexes is markedly distinct the male invariably leaves the female during incubation and undergoes eclipse, whereas where the colour-pattern is similar the male almost (there are exceptions) always stays with the female and undergoes no change of colour-pattern during his moult, and he thinks that in these facts lies the explanation of the assumption of the plumage which Waterton aptly flubbed "eclipse."

Another important article is that by Mr. Humphrey Boardman on "The Bittern at its Nest," accompanied as it is by two excellent photographs (taken in conjunction with Mr. J. Vincent at Hickling) of an old bird at the nest with the young. Mr. Boardman states that when the young were quite small the mother fed them by putting tiny morsels of food into their beaks. Later, as soon as the mother reached the nest, one of the young would stretch up and seize hold of her beak and grip it tightly and this is clearly shown in one of the photographs. The mother would then open her beak and make the young one loosen its grip sufficiently to allow her to disgorge food into its mouth. The young of this brood left the nest when they were about fourteen to nineteen days old.

Report on Scottish Ornithology in 1925, including Migration. By Evelyn V. Baxter and L. J. Rintoul. (Reprinted from *The Scottish Naturalist*, 1926, pp. 69-84, 99-126.)

THIS report contains accounts of an exceptional number of rarities detected as visiting Scotland in 1925, most of them in the islands. Many of them have already been referred to in our pages, but there remain several to which attention is drawn below. The Report is, as usual, very well and carefully drawn up and contains a great deal of interesting information.

NORTHERN BULLFINCH (*Pyrrhula p. pyrrhula*).—One or two were at air Isle between October 19th and November 9th.

ORTOLAN BUNTING (*Emberiza hortulana*).—In Isle of May on May 7th to 9th and 11th.

LAPLAND BUNTING (*Calcarius l. lapponicus*).—One at Buddon Ness (Forfar) on September 14th (first record for Tay area) and one at Hyskeir (Inner Hebrides) September 19th.

SNOW-BUNTING (*Plectrophenax nivalis*).—A nest containing five eggs was found at 2,000 feet in the mountains on the west side of Loch Treig (Inverness-shire), an extension of the known breeding range.

WOOD-LARK (*Lullula a. arborea*).—One at Hyskeir on May 17th—the first recorded occurrence in the Inner Hebrides.

GREY-HEADED WAGTAIL (*Motacilla f. thunbergi*).—One at Fair Isle on May 8th and one in the Isle of May on May 11th.

RED-BREASTED FLYCATCHER (*Muscicapa p. parva*).—One at Fair Isle on May 20th.

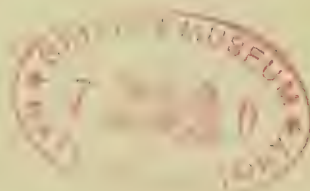
GREEN WOODPECKER (*Picus viridis*).—One was reported to have been seen in May at Megginch (Perthshire), and Lord Scone states that one was found dead at that place in the winter of 1923, while another was seen at Scone in October, 1912.

LITTLE OWL (*Athene noctua*).—Two were shot at Eaglesham (Renfrewshire) in March or April.

MONTAGU'S HARRIER (*Circus pygargus*).—One in April near Loch End (Kirkcudbrightshire) "came to an untimely end."

GARGANEY (*Anas querquedula*).—One, out of three seen, was shot near Mugúrum Island (Firth of Tay) in early September.

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NOTES ON THE NESTING HABITS OF THE PEREGRINE FALCON.

BY

H. A. GILBERT.

It is difficult to generalize about the nesting habits of the Peregrine Falcon (*Falco p. peregrinus*) because no bird appears to be more variable in its habits, but I will try to sum up the experience which I have gained at various times during the last twenty years of the nesting habits of some twenty-eight pairs of Welsh birds—eleven of which nest on inland cliffs.

The Peregrine appears to be very attached to its home and, though it may leave its nesting haunts in autumn and winter, at times it pays frequent visits to its nesting sites—indeed, often roosting on its home cliff all through the winter. About the beginning of February both birds begin to be in evidence more and more until, with the advent of March, they have taken up the position for the nesting season. The hen at this time frequently sets up a querulous, long-drawn squeal, and for at least a fortnight before she lays her eggs remains at home continuously—being fed during that time by her mate, who does all the hunting.

At this period the hen visits the nesting ledge at frequent intervals and often has her meal delivered to her thereon by her mate. Both birds are jealous, and strike at Ravens and Gulls incessantly; kills begin to pile up and tell-tale masses of feathers begin to be visible here and there near the nesting ledge. The hen may change her mind and go to another ledge after appearing to have chosen one definitely. In fact, two scrapes at least are nearly always made by the hen bird, though these scrapes may both be on the same ledge.

The Peregrine demands a certain amount of soil on a ledge among which to make her scrape, and I have never seen eggs laid on the bare rock, though I have seen several nests on ledges overlaid by pebbles and small pieces of rock without earth. Of course, the old nest of a Raven (*Corvus c. corax*), or Buzzard (*Buteo b. buteo*) may be chosen, but then, if possible, the old nest will be very old indeed—just a flat platform of soft material in which the bird can make a scrape. In fact I know of one pair of birds which always occupy old Ravens' nests, apparently because there are no earthy ledges, merely bare rock, on that particular range of cliff; and again, in contrast, I have several times known a Raven's nest of the year to be occupied by the Peregrine after the Raven



THE FALCON AND HER EYRY.

Three young 4-5 days old.

(Copyright photograph by G. C. S. Ingram.)



had been robbed. In these cases the Peregrine had been robbed also, and these were all second attempts. Sometimes on these occasions the Peregrine scrapes out the wool lining of the Raven's nest. Most ledges have a sheer, straight drop immediately below them, and nearly all are facing north or have some shelter from the sun for the young birds—such as a deep recess or a big rock. A particular site is seldom occupied two years in succession if the young have been successfully reared, because a Peregrine ledge, from which the young have flown, is a stinking shambles and even as late as the following March is a disgusting-looking place owing to the decaying bones and feathers which are littered all over the place. I have stood on ledges of cliffs made of rock so hard that the ledge had probably remained unaltered for generations and been amazed at the masses of bones thereon. Digging in the soil of such ledges one finds layer upon layer of bones and such ledges have probably been used by Peregrines for scores, and even hundreds, of years. On such a ledge I have seen the eggs laid in a scrape dug out of heaped-up piles of old bones.

My experience is that Peregrines begin to sit earlier inland than on the sea coast, and I should say that April 9th is the date on which most inland birds are sitting, while coast birds do not begin until about April 15th. The earliest date on which I know a Peregrine has been found sitting is April 4th, but this year I found on April 15th a Peregrine's nest on which the bird must have begun to sit on April 1st at the latest. I have also known birds which have not begun to incubate until April 27th (and I have heard of others which did not begin until May). If the first clutch of eggs is removed while fresh the bird lays again and begins to sit on the 22nd day after being robbed. I have notes of four such instances and a friend of mine has supplied me with five more.

The number of eggs laid seems to vary according to the district, but here in South Wales, as far as my notes go, half the nests hold four eggs for a first clutch. Practically all the other nests have three, clutches of two being quite rare, while I have only seen one egg as a full laying twice. As regards five eggs in a clutch I have never seen it myself though I have seen three authentic self-taken examples.

The cock bird certainly incubates the eggs at times. I have seen a cock do so on three occasions, though on two of them the incubation was by the same cock bird.

The food consists chiefly of Pigeons and Jackdaws and many small birds. I have seen a Carrion-Crow twice and

Though three times—though I do not think an undue proportion of these birds are killed. Several pairs on the sea coast were found to be feeding very largely on small rabbits. I have also unimpeachable information of a Peregrine being put off a freshly killed Buzzard which it was eating. A few pairs of sea-coast birds take to raiding farmyards for chickens during June and in this area a scythe blade can often be seen stuck on a pole as a charm against the Peregrine!

Finally, I consider that a Peregrine's nest is a very difficult one to find once the bird has begun to sit and provided that the sitting bird is so placed that she cannot see the searcher. I know several birds which cannot be put off by stones and even by gun shots.

LOCAL MIGRATION IN AUTUMN IN SOUTH- WEST FORFARSHIRE.

BY

HENRY BOASE.

THE writer has spent a good deal of time for a number of years in watching migration in the Tay Estuary. On the whole, the district has proved rather interesting in this particular branch of bird watching, and the accumulated records shew some notable features. I venture, in this paper, to deal in some detail with the early autumn passage of summer visitors from their nesting places on their way south, the preliminary movements to reach the main routes of their departure. The movements dealt with are, of course, more or less local in nature—I prefer the term “drift” for these movements rather than the more conventional term “migration” or “passage”, because it draws a distinction between the rather slow, leisurely movement of these early wanderings, and the relatively rapid and direct movement of true migration. I will deal only with a small number of species which have proved to be rather closely associated in these early flittings, and will further endeavour to shew that this “drift”, if leisurely, has definite form.

The bulk of the observations on which this account is based were made in a public park belonging to Dundee, the Balgay Hill, a lightly wooded hill about 450 feet high lying to the west of the town. The hill stands out boldly from its surroundings and has fairly large areas of open park and arable land around it, and is closed to the public at sunset. Although mostly covered with trees standing well apart, the park has only a small number of nesting birds each year, and probably few of these get off a brood owing to the attentions of boys, but this renders the place all the better as a point of observation of passage. It has not been possible to examine the park each day, but during the second half of July, all August, and the greater part of September, the place has been worked about twice a week, and commonly more frequently during periods of activity of drift. Consequently, in working out the results, the conclusions have been arrived at by summing up the numbers seen during each period of four days during the three months, July, August and September, and where more than one observation had been made in a period, the largest count has been taken in every case. General experience had long indicated the

general form of the drift and these figures, only made up in detail now after about fourteen years' work, confirm that impression.

It might be well to make clear that at present it has been impossible to determine the actual direction of movement over the passage line on which the Balgay Hill must lie. There are some indications, from the distribution in autumn of the Willow-Warbler (*Phylloscopus t. trochilus*) on the south shore of the Tay Estuary, that the drift may be to the south-east, but at the best it is surmise. Further, records at Buddonness seem to shew that the coastal movement, if it exists, does not pass through that point; while at Broughty Ferry, lying at the narrowest part of the Estuary, drift is well marked, almost equalling that at Balgay; yet the indications certainly do not point to passage across the Estuary at that point. Although drift is clearly in progress during daylight hours, nothing definite has been learned from this as to the direction of flight.

Coming now to the actual birds themselves, the figures for the Willow-Warbler shew that quite definite movement may be in progress so early as the period July 5-8th, but the start of the main movement is not usual until July 17-20th. There is then a gradual development of the passage until a maximum is reached during the period August 9-12th. Thereafter, the drift is definitely broken and a second peak in numbers, perhaps representing two-thirds of the count in the main passage, occurs during August 17-20th, and the numbers are maintained at about one-half the maximum up to August 25-28th. After that, the numbers passing drop to a mere fraction (about one-seventh), rising to a final and rather definite peak (one-third maximum) during September 5-8th. From that time, the drift dwindles, closing commonly during the 13-16th, but extended to September 27th on one occasion. There has been in most years a very distinct break in the movement from about July 30th to August 3rd: a break which, while not well shewn in the figures as made up, can be traced in a separate analysis of the period. The outline of this drift is based on the records of fourteen years. The largest number seen on the hill during that period was estimated at eighty, seen during the period August 9-12th. The drift during daylight, watched in a garden about one mile south-east of Balgay, shewed three main periods—in August—from 1st to 6th (a few only), 12th to 20th, and 24th to 28th. The birds remained only a few minutes in the trees and then departed.

Records at Buddonness have been few and far between, only five Willow-Warblers in all from about twenty visits in August and September. All but one were seen during the period August 17-25th, so that few appear to pass there (to linger, might be better) during that period. The remaining record refers to one seen on September 15th, 1924.

The records of the Spotted Flycatcher (*Muscicapa s. striata*) give a similar form of drift as in the case of the Willow-Warbler. The movement, however, does not shew definitely until July 21-24th, and reaches the first peak during July 25-28th. Thereafter, the drift continues on a smaller scale until the period August 9-12th, when the average is doubled. For a period the numbers are less, then a minor increase appears during the period August 21-24th, followed by the same drop shewn by the Willow-Warbler; rising again during September 1-4th to about two-thirds of the average numbers of the main passage, and remaining at about half these figures until September 9-12th. After that time, the numbers passing fall away and only two records have been got after September 24th. The greatest number seen on the hill at any time was estimated at twenty-five, and occurred during the period September 1-4th in 1916, in which year the mid-August movement was scarcely noticeable, and when passage in unusual numbers continued so late as September 17-20th. On the average, fifteen has been a common maximum, and nine is the average figure for the main passage of August 9-12th.

The Tree-Pipit (*Anthus t. trivialis*) drift differs from that of the Willow-Warbler by a tendency to run a few days later. Thus the first indication is delayed until July 9-12th; the first marked passage on July 29-31st; the main movement during August 13-16th, when on the average double the numbers seen during the first run pass, that is, an average of eleven as against five. The second August peak comes in the period 25-28th, and after that time the drift is uncertain. The Tree-Pipit shewed the same tendency to linger in 1916 displayed by the Flycatcher, and in this case also the main passage of August was smoothed out. It is interesting to note that the Willow-Warbler shewed no disturbance of its usual routine in 1916. The Tree-Pipit drift has occurred at Balgay on one occasion so late as September 25th, and there are records of single birds at Buddonness on August 25th and September 3rd, 1923.

The Redstart (*Phœnicurus ph. phœnicurus*) occurs in company with these three species and its numbers follow

similar fluctuations. It differs from them in that the passage of July 25-28th shews numbers equal to those of August 9-12th; that the gap in mid-August is more marked, extending from August 13th to 24th, and that after a well-marked peak in the period August 25-28th the numbers are well maintained until September 4th. After that date the records are rather erratic, but cover a period to September 21st. The earliest date of drift so far obtained is July 11th, and the normal start in the period July 17-20th. Records at Buddonness refer to birds there from September 29th to October 3rd, 1923, dates quite outside the limits found for the drift.

In including the Tits, with the Goldcrest (*Regulus r. anglorum*) and Tree-Creeper (*Certhia familiaris britannica*), in this account of autumn drift, the writer is perhaps treading on dangerous ground. However, there seems to be something more than chance in the appearance every year of these species in numbers shewing fluctuations at periods marked by activity of drift of purely summer visitors, and also associated with these in quite definite parties.

The Blue Tit (*Parus cæruleus obscurus*), the most plentiful of the Tits, shews annually a sharp increase in the period July 17-20th, and a gradual increase up to August 5-8th, following definitely the Willow-Warbler drift at this time. A further peak in numbers occurs during August 21-24th, and the numbers reach a maximum during the period from August 29th to September 8th. After this time there is no evidence of regular drift. The movement differs from that of the Willow-Warbler in that the maximum passage of the Blue Tit occurs at a later period when the last "peak" of the Willow-Warbler is due; the two earlier periods of marked movement refer to lower numbers to the extent of only two-thirds at August 5-8th. The passage as a whole stands out sharply and definitely both at the start and finish, and the numbers moving reach about one-third those of the Willow-Warbler.

The Great Tit (*Parus major newtoni*) is much less numerous on passage than the Blue Tit (numbers about 3:8), but it has also the definite periods at July 25-28th, August 5-8th, August 21-24th and September 1-4th, the last of which is the period of maximum passage. On the other hand, drift continues in indefinite form on a moderate scale into October in numbers about two-thirds of the maximum and about one-half those of the other "peaks."

The Coal Tit (*Parus ater britannicus*) records are for greater numbers than those of the Great Tit, reaching not far short

of half those of the Blue Tit. The drift opens in the period July 25-28th and this appears to be the period of maximum passage at Balgay. In other words, the bulk passing there come with the first wave of Willow-Warblers. Up to August 9-12th some continue to pass; after that period the movement becomes indefinite until September 5-8th, when there is a further passage. The average figures shew almost entire absence of this bird at Balgay after that time until the end of the month, by which time, perhaps, the roving parties of wintering birds have been established. H. R. Colman has furnished two records of interest for the Coal Tit—one concerning a party of about fifty associated with Blue Tits, of which there were about forty, and some Willow-Warblers, at Broughty Ferry on August 23rd, 1919; the other of a lesser number, associated with Tree-Creepers, Blue Tits, Goldcrests and Willow-Warblers, at the same place on August 8th, 1919.

The Tree-Creeper has been recorded in small numbers only, but is easily overlooked. Any claim to passage made for the Creeper rests on its association with other species certainly on drift during a period from July 11th to August 15th, with perhaps most records for the period July 26-29th. The record of July 11th, 1920, is covered by drift on that date of the Willow-Warbler, Flycatcher and Redstart, and the main movement, if movement it be, certainly falls within the first main period of general drift. The Tree-Creeper has been met with in definite association with these various species at other points during definite passage of Willow-Warblers, so that the inference seems clear. On July 11th, 1920, the behaviour of the Tree-Creeper was striking in the excitement shewn by it. It chased, and was chased by, various Willow-Warblers and Tits that came near, in that care-free manner of birds on drift.

The evidence of drift of the Goldcrest is not satisfactory. The various records made during the whole period may hint at some slight connection with the main drift periods of the autumn, but the only regular feature is its association almost annually with the late arrivals of the Great Tit at Balgay. During the last week of September, in 1922, 1923 and 1925, there were records of moderate numbers at Buddonness—in 1925, there were some Goldcrests there on September 8th, but no connection could be traced in these records with those of Balgay. For the most part, the Goldcrests seen in July and August do not associate with the Tits and Willow-Warblers then on drift.

The species dealt with are those forming the main passage at Balgay Hill. Certain other species have been found there but in numbers are insignificant. The Wood-Warbler (*Phylloscopus sibilatrix*), for instance, passes regularly, occurring with "rushes" of Willow-Warblers in early August, and the Garden-Warbler (*Sylvia borin*) was found at Balgay in 1920. It is rather remarkable that the Whitethroat (*Sylvia c. communis*) has been found on Balgay during drift on only four occasions and the Sedge-Warbler (*Acrocephalus schænobæus*) not at all, although both species are numerous enough in Perthshire and Forfarshire. It points to an entirely different behaviour on the part of these two species during their early movement in autumn. In the area just west of Dundee, the records of the Whitethroat shew indication of departure only, not of drift, and the same may be said of the Sedge-Warbler. Both species appear to be more numerous during the period July 25–28th, but as the records refer to numbers in nesting places, they are not of much consequence. It may be that these species prefer haunts during drift similar to their usual nesting places—the Sedge-Warbler sometimes feeds in standing grain—but the numbers so far recorded are too small to be of any comparative value. The Sedge-Warbler is, by the way, a bird which seems to linger long in its nesting places, or, to put it another way, it is found in such places as it nests in at comparatively late dates (mid-September). The Whitethroat may shew drift during the period August 10–12th, but not clearly so, as the records refer to occurrences of family parties and not groups of associated birds, which makes the figures unsatisfactory. The late records of Whitethroat—that is, occurrences in September—have been for birds of the year, so far as has been determined, lingering in potato or turnip cover.

The writer has endeavoured to determine the time of departure of the Willow-Warbler over a fairly wide area of Forfarshire and Perthshire, and it seems clear that, particularly for the northern portion of Perthshire, practically all the Willow-Warblers have departed by the end of the first week of August, and by that time the Blue Tit is very much reduced in numbers. In the glens of the Grampians east of the Tay, Strathardle, for instance, drift is going on down stream—that is, roughly to the south—in the end of July; in Glenesk, further east, some Willow-Warblers still remain in August. No Willow-Warblers have been seen in the Pitlochry-Rannoch area in the third week of August, but at other times it has been seen in numbers on the north side of

Strathmore some distance east of the Tay in the last days of August, under conditions, however, which suggested drift. The Redstart has been seen in its nesting places as late as September 9th in the upper Tay area.

As already mentioned, the examination of the records available has confirmed in detail what had seemed fairly evident from the field work on which they are based, that the main movement for the departure of the common summer visitors in the Tay area is within the period August 5-12th; that the movement of departure may be well on the way by mid-July, and that it is finished almost completely in the first week of September. It seems also clear that a proportion, certainly a small one in some cases, of the common Tits and anyway of the Tree-Creeper, do rank as summer visitors in the Tay area, and, finally, that in these early movements or "drift," the various species mentioned tend to travel in parties associated together in a fairly definite manner.

THE SUPPOSED NESTING OF THE VELVET-SCOTER, LONG-TAILED DUCK AND SCAUP IN SCOTLAND.

BY THE

REV. F. C. R. JOURDAIN, M.A., H.F.A.O.U., H.M.S.O. DE FRANCE, ETC.

My attention has recently been called to an article on this subject by Mr. H. W. Robinson which appeared in the *Scottish Naturalist* for 1926, pp. 177-178. In this paper Mr. Robinson states that there is "proof positive" as to the breeding of the Velvet-Scoter in Great Britain. He also produces evidence of another record of the breeding of the Long-tailed Duck and resuscitates an old and erroneous record of the breeding of the Scaup.

Of these perhaps the most important is that of the breeding of the Velvet-Scoter (*Oidemia fusca*). This species has been observed till late in the nesting season on several occasions in Scotland by thoroughly competent observers, amongst others by the Duchess of Bedford, and I believe that the two eggs which figured in Sir Vauncey Crewe's collection were found on the same island where the birds had been seen in the previous season. I should like to say that I have every confidence in the good faith of Mr. Whitaker, but as the nest which he discovered was already deserted (as described by him) it was impossible to identify the eggs in the usual way by watching the parent bird on to the nest. What evidence Mr. Whitaker has that the Scoters did actually breed later on "hard by" I do not know, and none has up to the present been published, but I examined the eggs which were taken from the deserted nest and they had not the appearance of Velvet-Scoters' eggs at all. It is, I think, a rash proceeding to assert that there is "proof positive" that this species has nested more than once in the British Isles on the evidence of two non-typical eggs from a deserted nest!

The next species referred to is the Long-tailed Duck (*Clangula hyemalis*). In this case I saw the eggs and down of the 1911 nest myself and am certain that they were correctly identified. When the record was first published, the details were so scanty that we strongly protested against its acceptance, but Mr. Robinson has apparently overlooked the letter from the Rev. J. R. Hale, which appeared in *British Birds*, Vol. VII., 1913-14, pp. 205-6. This, I think, settles the question quite satisfactorily, for neither of us has any personal

interest in the clutch. Apparently Gunn in the following year obtained a clutch from the Orkneys, part of which was incorporated in the Crewe collection. In this case we have no evidence whatever beyond the statement of a professional collector, yet Mr. Robinson is prepared to accept this as authentic, while throwing some doubt on the 1911 record! No one now doubts that the Long-tailed Duck has bred from time to time in Scotland, and it is quite probable that Gunn's eggs belong to this species. It would, however, have been more satisfactory to have had some confirmation from other sources and it is strange that Mr. Hale in 1913 did not hear of this case.

The last case of a neglected record brought up by Mr. Robinson is that of a clutch of eleven eggs of Scaup (*Nyroca marila*), taken in Fife* on June 6th, 1880, of which he has failed to obtain any further data. Mr. Robinson's researches cannot have been of a very thorough or careful nature or he would have soon come across references to this clutch.† It was taken by the late Dr. A. C. Stark at Loch Leven, Fifeshire, on June 6th, 1880, and was sold on June 19th, 1902, for £2 7s. 6d. to Sir Vauncey Crewe. I called attention to this record in *British Birds*, Vol. II., p. 85, and this elicited a letter from the late Mr. William Evans (*l.c.*, pp. 132-134) which I think finally disposes of this error. Stark was a careful and trustworthy observer, but his eyesight was defective. At the time of his visit to Loch Leven he saw only Scaup on the lake, and sent a detailed account to the *Proc. Royal Phys. Soc., Edinb.*, VII., p. 203. Next year he twice again visited Loch Leven in company with Mr. Evans, but only Tufted Duck were to be seen where he had observed Scaup, and he frankly admitted the possibility of his having made a mistake in identification to Mr. Evans. For this reason Howard Saunders dropped the record in the second edition of the *Manual* although he had adopted it in the first edition (1889), but qualified the statement in the Appendix. As will be seen from the above brief statement, quite a literature has grown up about this clutch, and it is surprising that Mr. Robinson should have once more dragged it into publicity after it had been decently interred in 1908.

* Strictly Kinross.

† See, for example, Yarrell, 4th Ed., IV., p. 426; Saunders' *Manual*, 1st Ed., *l.c.*; Sharpe, *Handbk. to the Birds of Gt. Britain*, II., p. 17; Harting, *Handbook of Br. Birds*, 2nd Ed., p. 251.

Perhaps it is fortunate that the supposed clutch of Black-headed Bunting's eggs (*Emberiza melanocephala*), stated to be "the only British record" in the catalogue of the Crewe collection, as taken at Skegness in "1921 or 1920," and so is not mentioned by Mr. Robinson, who has confined his remarks to the Scottish records. We sincerely hope that no one will urge the acceptance of this record—and only mention it in order to avoid the possibility of its being disinterred in the future by some one who had not the opportunity of seeing it before it was discreetly withdrawn without a single bid having been made for it.

TAWNY OWLS AND BATRACHIAN FOOD.

BY

E. ST. GEORGE BETTS.

As a rule, when describing the diet of the Tawny Owl (*Strix aluco sylvatica*), most writers of bird histories lead off with rats, voles, and mice, while birds, shrews, beetles and earth-worms are pretty sure of honourable mention. In a category of secondary importance, usually introduced by some such word as "occasionally" or "sometimes," may be found, with sufficient frequency to warrant mention, less customary items like squirrels, young rabbits, moles, fish, and, much more rarely, frogs.

From my own experience of the Tawny Owl's food, obtained almost entirely by examination of pellets, I should say that the outstanding dish of the bird, as compared with other British Owls, is rats, and that in the same way as the remains of small birds in the pellets of Long-eared Owls (*Asio o. otus*) may be said primarily to distinguish the food of that bird as a species, so do the bones of rats, either small adults or of three-quarters growth, distinguish the Tawny Owl's.

But during the past few years I have become convinced that the large extent to which the Tawny Owl preys upon frogs or toads, or both, at any rate in some districts, is not adequately realized by many ornithologists; and although the instances observed by myself are confined to birds of the Midlands, the districts, especially in two cases, are so widely separated that I feel quite sure the habit is far more general than is supposed.

With some of these Owls, but probably for limited periods only, the food must consist almost entirely of frogs. When this is the case, the castings of frog bones scarcely merit the name of pellets, but should rather be described as oblong packets of dry bones, the long limb bones and ilia, as one would expect, lying parallel with one another and in the position determined by their passage through the Owl's œsophagus.

Sometimes a white chalk-like substance is associated with these packets of loose bones, and I have also found frog bones in a form which might be termed pellets, for they were held together by a yellowish-coloured, dry, cementing matter. Through the kind office of Mr. T. A. Coward I learned that analysis of this substance proved it to be of vegetable origin; so possibly the Owl is accustomed to swallow aquatic or other

vegetable matter as an aid to digestion when partaking of this food.

For convenience sake I have written of the remains as frog bones, although I am inclined to believe that the victims were toads rather than frogs, although this may seem unlikely. Batrachian bones are so different from avian or mammalian that a glance suffices to distinguish them; but I do not myself know of any salient distinction between the skeleton of a frog and a toad, and at present have no opportunity of comparing the two. I need hardly say it very seldom happens that any two bones, even of the skull, remain united after ejection by the Owl, although I noticed once two frontoparietals still holding together.

If, as I think probable, the relics are those of toads, it is possible that the chalky substance referred to is not unconnected with the acidities and other unpleasant secretions of a toad's skin, and, while it is but a guess on my part, it seems possible that the Owl's digestive juices in acting upon the toad's integument would chemically produce a great deal of frothy matter which in drying would become chalk-like. On the other hand, Owls may deliberately take some mineral substance with toad-flesh, in order to promote the digestive process.

Frogs do not appear in the list of food stuffs found in the stomachs of 16 Tawny Owls examined by Dr. Collinge; but he appends the result of an examination of 127 pellets of the bird, and among these were found the remains of only three frogs.

My own collection of remains tells a very different story; but, although in the case of one Owl, batrachian bones very largely predominate, it is not suggested that even this Owl confines itself mainly to such food. Nor is it necessary to conclude that it does so because the whole aggregate of separate regurgitations consists of frog bones, without traces of fur or feathers, for I believe it is characteristic of Owls, or at any rate of some species, to make a "run" upon one sort of diet for a time, so that if an Owl started the night by taking a roosting bird, it would probably continue to take roosting birds for that night; and the same with voles, or frogs.

Perhaps it is hardly necessary to add that the taking of frog food can hardly be a degenerate habit. One of the frog-eating Owls I have in mind was a first-rate "ratter," and I have seen it in broad daylight holding with the talons of one foot a nearly full-grown rat against the branch of a Scots pine in which it was roosting. That was in the forenoon and

probably represented a late (*i.e.*, an early morning) catch. Another Owl which consumed a great number of frogs was also a Blackbird taker, and the last pellet of that bird which I picked up appeared to consist of young rabbit remains, although nearly all the soft and "green" bones had apparently been assimilated as food.

NOTES

WHITE EGGS OF TREE-SPARROW.

IN Vol. XIX., p. 95, is a note of a whole clutch of five almost pure white eggs of the Tree-Sparrow (*Passer m. montanus*) laid in a nesting box at Rosehill, Cheadle, Staffordshire. Again, presumably the same hen bird, has this year laid a similar clutch of almost pure white eggs which I hope she will hatch in a few days. Last year the eggs were of the normal type. Of course, I am referring to the same nesting box each year. The hen bird this year was found ringed with a ring in which the number of the ring was stamped *inside* the ring, with the result that the number is so worn away as to be undecipherable, so that I am unable to say if the box has been used each year by the same bird.

JOHN R. B. MASEFIELD.

SONG-THRUSH BREEDING IN OLD BLACKBIRD'S NEST.

ON May 28th, 1927, Mr. T. M. Murphy was climbing an elder-tree at Littlehampton, Sussex, in which a Blackbird (*Turdus m. merula*) nested last year, when, to his great surprise, a Song-Thrush (*T. ph. clarkci*) flew off the old Blackbird's nest, which, in spite of the fact that it was considerably tilted to one side, contained three Thrushes' eggs.

M. F. M. MEIKLEJOHN.

MOUTH COLORATION OF NESTLING RING-OUZEL.

As there is no mention in *The Practical Handbook* of the mouth of the nestling Ring-Ouzel (*Turdus t. torquatus*) it may be of interest to state that the inside is deep yellow in colour but not all of one shade; there are no spots, and the flanges are white, shading to yellowish-white towards the gape to pale yellow at the gape.

H. W. ROBINSON.

SWALLOWS AND HOUSE-MARTINS ON MIGRATION IN THE ATLANTIC.

ON a voyage to Cape Town I observed four Swallows (*Hirundo rustica*) on board ship on April 27th, 1927, 180 miles due west of Gibraltar, and over 100 miles from the nearest land. They remained with us for two days. A single Swallow appeared on May 1st, sixty miles from Tenerife.

On May 4th a single House-Martin (*Delichon urbica*) came on board about 140 miles west of Sierra Leone and the nearest land ; by the following morning the bird had left.

A. H. R. WILSON.

SMOKY-GREY AND RED ON NECKS OF WILD SWANS.

WITH regard to the note on Bewick's Swans having smoky-grey necks, mentioned on p. 295, Vol. XX., it may be of interest to state that I have often seen this on the necks of adult Whooper Swans, and from the fact that it can be brushed off with the hand or a damp cloth, I concluded that it was the pollen of some water plant, and was not a phase of plumage at all.

I have often seen it stated that the rusty-red colour on the heads and necks of Whoopers is a sign of immaturity. With this I cannot agree, but rather that it is a sign of age ; the more red the older the bird. This is borne out by the fact that in the enormous 28-lbs. Whooper shot in Orkney, which by its toughness must have been a centenarian, the rusty-red extended well down on to the breast.

This rusty-red colour is most certainly not due to iodine as some writers have affirmed.

H. W. ROBINSON.

[The suggestion that the rusty-red colour on the heads and necks of Swans is due to staining by iodine is, of course, from the nature of that element, ridiculous. On the other hand, Stevenson long ago showed that it is due to staining by ferric oxide and, as regards the Mute Swan, the depth of coloration is quite independent of the age of the individual, *vide B. of Norfolk, III.*, pp. 52, 75 *et seq.*—EDS.]

BRENT GOOSE IN N. WALES IN MAY.

ON May 12th, 1927, I saw a Brent Goose (*Branta bernicla*) on the strait between Holy Island and Anglesey. The bird passed me from behind and alighted among some Sheld-Ducks. It let me get within 400 yards and, as I had good glasses, and know the bird well, I have no doubt of the species. It rose with the ducks, but soon separated from them and flew out of range of my glasses in a northerly direction. It showed no sign of injury and was in good plumage.

J. A. POWNALL.

EARLY BREEDING OF GREAT CRESTED GREBE.

A BROOD of three Great Crested Grebe (*Podiceps c. cristatus*) now to be seen with the parent bird on Betton Pool, near Shrewsbury, appeared to be about a fortnight old on May

18th, 1927. This is exceptionally early according to my experience. The *Practical Handbook* gives the incubation period as about four weeks, so that the eggs in this instance must have been laid in the first or second week of April. Grebes frequent this pool during the greater part of the year, but there were none there in December or January. I do not think that they leave the district, however, for there are four other meres within a radius of three miles, and the birds seem to wander between one or another of these in the winter months, only settling down at the breeding place in February or March.

H. E. FORREST.

[The breeding season of the Great Crested Grebe is variable and probably depends to some extent on the amount of covert available. While Many birds do not nest till May or even sometimes not till June, Mr. G. K. Baynes has recorded full clutches on March 27th, 1915, and April 1st, 1914, in Surrey, cf. *Br. B.*, VIII., p. 292. Cf. also *Ann. Scott. Nat. Hist.* 1907, p. 206, but this last record seems to require confirmation.—F.C.R.J.]

DOTTEREL IN SHROPSHIRE.

A PAIR of Dotterel (*Charadrius morinellus*) appeared on a field at Wroxeter, near Shrewsbury, during the morning of May 3rd, 1927, and stayed for about an hour after they were first seen by Mr. Frank Jackson. They exhibited the extreme tameness which is such a marked trait of this species, allowing Mr. Jackson to approach quite close to them, and then only flying about twenty yards and again alighting. The Dotterel is a rare and irregular visitor to Shropshire. The last prior record was in May, 1886, when three were shot out of a flock of thirteen near Wellington. In North Wales the most recent record was two seen by Colonel Alan Gough, of Pwllheli, on Rhiw Mountain, Llyn, Carnarvonshire, May 10th, 1920.

H. E. FORREST.

BEHAVIOUR OF NESTING BIRDS IN FLOODS.

ON April 9th, 1927, there was a great fall of rain and snow on the Shropshire-Montgomeryshire border near Oswestry. The fall was so heavy that between Oswestry and Ellesmere the fields were flooded to an unusual extent. As a result, large numbers of nests of Lapwing (*Vanellus v. vanellus*) and Snipe (*Capella g. gallinago*) were flooded. Eggs that had been incubated for some time floated to the edge of the beds of rushes and were there eaten by Rooks, Crows, Magpies, etc. Most of these eggs were of Lapwings. The Snipe had not been

sitting long and the eggs were still in the nests after the water went down. One Snipe, nesting in a small tuft of rushes, raised the nest something like four inches and actually saved three of the eggs; the fourth was on the old bottom below the new material. Some of the Lapwings, in cases where the water only covered the eggs for a few hours, came back and sat on the eggs and in some cases laid to them; I was not there late enough to see how they hatched. A nest of a Redshank (*Tringa t. totanus*) containing two eggs was also covered for many hours, at least twenty-four, but the bird finished her clutch. When I looked at them a fortnight later two of the eggs had chicks, but two were clear and useless. Presumably these were the two that were under water so long. How long could eggs lie under water without being rendered useless?

The building up of the nest by the Snipe is a new experience to me, though it is a very common habit with Moorhens (*Gallinula ch. chloropus*), especially when nesting on ponds, to fight a rise in water by raising the platform of the nest; both birds work very hard and the nest becomes very untidy. During this storm, which lasted thirty-six hours at its centre, a pair of Moorhens beat the record for salving operations. Their nest was in a small, low-lying pond, hardly more than a broad ditch. Before the storm the nest was some few inches above the water and six inches or more below the tops of the rushes. After the storm it must have been eighteen inches above the rushes. I saw it on April 12th after the water had gone down and it was then a foot clear of the rushes and absurdly obvious, being very much the highest object in the neighbourhood. It had probably sunk considerably with the receding of the water as it was badly tilted over, possibly by the birds in getting on and off. Also the cup was much bigger and flatter than a nest usually is and the seven eggs were scattered about on it. Nevertheless it served its purpose and the birds hatched off successfully. I have seen Moorhens fight a rise of water in a pond with a very small stream through it, but my experience is that they quickly recognise the uselessness of fighting a rising brook or river and give up. When they are busy on the task of saving the nest they utter a note which clearly indicates their perturbed state.

J. H. OWEN.

LITTLE AUK INLAND IN WESTMORLAND IN MAY.

On May 5th, 1927, a Little Auk (*Alle alle*) was brought to me alive. It had been captured in a poultry run at the head of Windermere, and did not appear to be injured in any way.

It was subsequently released on the lake, and I hope was able to resume its interrupted journey. A previous occurrence of this bird in the same locality was reported in Vol. XIV., p. 189. A. ASTLEY.

PHEASANT CHICKS SWIMMING RIVER.

IN May, 1927, I put up a hen Pheasant (*Phasianus colchicus*) out of the reeds bordering the Hampshire Avon. She flew across and settled in the reeds on the other side. A few moments later, in answer to her calls, six nestlings started to swim across the river. Five got over but one was soon in difficulties and was eventually drowned. Two more nestlings then attempted to cross—one succeeded and one was drowned. I was ten to fifteen yards away from the nestlings when they started to cross so they were not suddenly frightened into the water. The river is about twenty-five yards broad and its current fairly strong. BERNARD J. RINGROSE.



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EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND

NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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THE NESTLINGS OF SOME FURTHER RARE BRITISH BIRDS.

BY

H. F. WITHERBY.

IN 1925, I was able to describe the nestlings of some species which had not been examined when the *Practical Handbook* was published (see Vol. XIX., p. 70). This summer, during a trip in the mountains of central Spain, I was fortunate in finding nestlings of a few additional undescribed species. One of these, the White-spotted Bluethroat, which we found breeding plentifully amongst the broom on the higher parts of the Sierra de Gredos (between 4,000 and about 7,000 feet), was quite a surprise, as the bird was not previously known to breed in the Spanish Peninsula. In the western Gredos, at about 6,000 feet, the species was quite common and the males by their actions and song were conspicuous. They indulge in a beautiful singing-flight, something like that of a Pipit, and singing sweetly descend like a parachute, with their legs dropped and held down stiffly and fully extended. Arrived on the top of a broom bush they complete the song, constantly cocking up their tails at right angles to the body. They have some favourite point on which to perch and sing, and this is usually a dead bough of a broom sticking up a little higher than the rest of the bush. They spend much time hunting the ground for food, and are then usually hidden amongst the thick bushes, but they constantly come up to these points to sing and only more occasionally perform the singing-flight. Most of those we saw had pure blue throats, but some showed a slight white spot when the feathers of the throat were turned up in singing, while a smaller proportion had a well-defined white spot in the centre of the brilliant blue. A nest on June 21st contained three young newly-hatched and an infertile egg. The nest was placed in a low broom bush and rested upon boughs trailing on the ground and was barely concealed by the branches above it. It was made of dead broom twigs and lined with grass and fine roots. While the species usually breeds in swamps, it was here nesting on dry hill sides.

ORTOLAN BUNTING (*Emberiza hortulana*).—Vol. I., p. 122*. Down: whitish-grey with slight buff tinge, fairly long and plentiful; distribution: inner supra-orbital, occipital, humeral, ulnar, spinal, femoral, crural and ventral. Mouth: inside

*Reference to volume and page in the *Practical Handbook*, where the species is described.

pink, no tongue-spots ; externally, gape-flanges pale creamy-yellow. N.B.—Just hatched. Sierra de Gredos, Spain, June 18th, 1927.

WATER-PIBIT (*Anthus s. spinoletta*).—Vol. I., p. 184. Down : dark mouse-grey, long and plentiful ; distribution : outer and inner supra-orbital, occipital, humeral, ulnar, spinal, femoral, crural and ventral (short on two last). Mouth : inside pink flesh, no tongue-spots ; externally, gape-flanges very pale yellow. N.B.—Just hatched. Sierra de Gredos (6,500 feet), Spain. June 21st, 1927.

CENTRAL EUROPEAN CRESTED TITMOUSE (*Parus c. mitratus*).—Vol. I., p. 240. Down : dark mouse-grey, long and fairly plentiful ; distribution : inner supra-orbital, occipital and spinal. Mouth : inside dull yellow, no tongue-spots ; externally, gape-flanges bright pale yellow. N.B.—Just hatched. San Ildefonso, Segovia (Sierra Guadarrama), Spain. May 23rd, 1927.

WHITE-SPOTTED BLUETHROAT (*Luscinia s. cyanecula*).—Vol. I., p. 477. Down : dark slate-grey, fairly long and plentiful ; distribution : outer and inner supra-orbital, occipital, humeral and spinal. Mouth : inside orange, no tongue-spots ; externally, gape-flanges whitish-yellow. N.B.—Just hatched. Sierra de Gredos (6,500 feet), Spain. June 21st, 1927.

RECOVERY OF MARKED BIRDS.

No.	Place and Date Ringed.	Place and Date Recovered.
JACKDAW (<i>Colæus m. spermologus</i>).		
77438	Dalston (Cumberland), 11.6.25 nestling, by R. H. Brown.	Carlisle (Cumberland), 24.2.27, by G. Hogg; again re- leased.
79665	Near Canterbury (Kent), 16.5.26, young, by H. Anthony for St. Ed- mund's N.H.S.	Near Margate (Kent), June, 1926, by T. E. Papworth.
RR.23	Crags of Lundie (Forfar), 5.6.26, nestling, by T. L. Smith.	Auchterhouse (Forfar), 17.1.27, by Miss M. O. Valentine.
MAGPIE (<i>Pica pica pica</i>).		
74564	Near Coventry (Warwick), 17.5.25, nestling, by F. Dipple.	Near where ringed, 9.4.27, at nest, by H. G. Wagstaff.
STARLING (<i>Sturnus v. vulgaris</i>).		
59248	Seaford (Sussex), 27.6.23, ad., by J. F. Thomas.	Newhaven (Sussex), 16.4.27, by Miss J. E. Delacourt.
56683	Near Reading (Berks.), 21.5.23, nestling, by N. H. Joy.	On engine running between Torquay and Paddington (possibly struck engine at Reading), 31.5.27.
Z.2755	Eton (Bucks.), 13.1.24, ad., by A. Mayall.	Near Windsor (Berks.), 12.6.27, by G. L. Simmonds.
Z.2790	Near Leamington (War- wick.), 15.1.25, ad., by P. K. Chance.	Where ringed, 1.11.26, by ringer.
Z.2781	Ditto ditto.	Ditto 25.11.26.
X.3673	Ditto 30.12.26.	Near where ringed, 23.4.27, A. E. Rigbye.
Y.6482	Helensburgh (Dumbarton), 12.5.25, nestling, by T. Kerr.	Near Belfast, Ireland, 24.12.26, by F. Shepherd.
Z.8598	Scone Parish (Perth), 27.5.24, nestling, by Lord Scone.	Near where ringed, 16.2.27, by A. Hilson, per ringer.
X.7703	Scone Estate (Perth), 11.5.26, nestling, by Lord Scone.	Where ringed, 31.3.27, by P. Pitcarthley, per ringer; again released.
D.8614	Torrance (Stirling), 14.5.26, young, by J. Bartholo- mew.	Where ringed, April, 1927, by ringer.
X.1695	Near Gt. Budworth (Ches.), 5.12.25, ad., by A. W. Boyd.	Kettering (Northants.), 22.4.27, by R. Atkins.
X.1738	Ditto 6.12.25.	Near Schleswig (Schleswig- Holstein), early Aug., 1926, by E. Frahm.
X.1618	Ditto 4.12.25.	Hatmeskoven, Saxkjoberg (Denmark), 2.7.27, by K. Halvorsen.

STARLING (*continued*).

No.	Place and Date Ringed.	Place and Date Recovered.
X.1760	Near Gt. Budworth (Ches.), 13.12.25, ad., by A. W. Boyd.	Where ringed and near where ringed, 13.2.27 and 6.6.27, by ringer and T. Houlgrave.
X.2614	Ditto ditto.	Where ringed, 22.1.27, by ringer; again released
X.2446	Ditto 16.1.26.	Near where ringed, Dec., 1926, by J. Lyons, per ringer.
Y.5154	Ditto nestling, 14.5.25.	Ditto, 23.2.27, by Mr. Milling- ton, per ringer.
Y.3316	Broughty Ferry (Forfar), 25.10.25, ad., by J. N. D. and T. L. Smith.	Where ringed, early June, 1927, by D. Marr.
X.2212	Carlisle (Cumberland), 4.12.25, ad., by J. N. D. Smith.	Ditto, 19.5.27, by ringer; again released.
X.2287	Ditto 6.12.25.	Ditto 24.5.27.
X.2293	Ditto 10.12.25.	Ditto 22.5.27.
X.3261	Ditto 2.5.26.	Ditto 23.5.27.
X.3262	Ditto ditto.	Ditto 24.5.27.
X.3277	Ditto immature, 3.9.26.	Ditto, 20.5.27 (Caught at nest).
X.3279	Ditto ad., 4.9.26.	Ditto 29.5.27.
X.3282	Ditto 1.11.26.	Ditto 24.5.27.
X.3166	Ditto 14.1.26.	Ditto, May, 1927, by R. Armstrong.
X.2338	Ditto 15.12.25.	Ditto, 14.2.27, by J. Barn- father.
X.3599	Broughty Ferry (Forfar), 11.5.27, nestling, by T. L. Smith.	Near Alyth (Perth), June, 1927, by J. Thomson.

GREENFINCH (*Chloris ch. chloris*).

B.9045	Near Gt. Budworth (Ches.), 25.1.25, ad., by A. W. Boyd.	Where ringed, twice Feb., March and Nov., 1925; twice Feb., Dec., 1926; Jan., 1927, by ringer.
B.9164	Ditto 9.3.25.	Ditto 8.3.27
C.5727	Ditto 5.7.25.	Ditto 22.10.25; 25.6.27.
D.3233	Ditto 3.11.25.	Ditto, Jan., May, twice Dec., 1926; three times Jan., May, 1927.
D.3279	Ditto 13.12.25.	Ditto 5.3.27.
D.3351	Ditto 17.1.26.	Ditto 21.12.26; 10.5.27.
D.5008	Ditto 7.2.26.	Ditto 19.12.26.
D.5069	Ditto 16.3.26.	Ditto 22.1.27.
E.9642	Ditto 4.3.27.	Ditto 26.6.27.

LINNET (*Carduelis c. cannabina*).

D.9794	Whitmore Common (Surrey), 25.5.26, nestling, by Mrs. L. E. Taylor.	Casteljaloux (Lot et Garonne), France, 12.10.26, by Mlle. H. Tuilier.
--------	--------------------------------------------------------------------------	-----------------------------------------------------------------------------

No.	Place and Date Ringed.	Place and Date Recovered.
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CHAFFINCH (*Fringilla c. cœlebs*).

9338	Bath (Somerset), 28.6.24, nestling, by Miss B. A. Carter.	Near where ringed, 22.1.27, by G. Lipswent.
NP.60	Pyrford (Surrey), 3.10.25, ad., by W. P. G. Taylor.	Where ringed, 28.3.26, by ringer.
QZ.1	Ditto ditto.	Ditto, 5.7.26; again released.
D.5585 (QZ.3)	Ditto, 8.10.25, by Mrs. L. E. Taylor.	Ditto 26.2.26; 7.4.26.
D.5694	Swanmore (Hants.), 22.3.26 ad., by M. Portal.	Ditto 29.5.27.
C.5905	Braughing (Herts.), 19.5.26, nestling, by R. W. Hale, for Lon. Nat. Hist. Soc.	Standon (Herts.), April, 1927, by H. R. A. Higgins.
A.2004	Near Gt. Budworth (Ches.), 1.2.23, ad., by A. W. Boyd.	Where ringed, 13.2.23; 15.8.24; 25.4.26; twice May, 1927, by ringer.
A.2043	Ditto 8.3.23.	Ditto, Mar., Dec., 1923; Jan., 1924; Feb., Dec., 1925; Jan., Dec., 1926; Jan., 1927.
D.3301	Ditto 28.12.25.	Ditto, 15.6.26; 11.3.27; 18.6.26.
D.3319	Ditto 14.1.26.	Ditto 22.1.27.
D.3322	Ditto ditto.	Ditto 21.5.27.
E.9927	Holmwood (Surrey), 27.2.27, ad., by H. B. P. King- ham.	Where ringed, 2.6.27, by Mrs. W. Worrow.

YELLOW BUNTING (*Emberiza c. citrinella*).

B.9175	Near Gt. Budworth (Ches.), 10.3.25, ad., by A. W. Boyd.	Where ringed, 5.7.25; 10.7.26; twice May, 1927, by ringer; again released.
D.3327	Ditto 14.1.26.	Ditto 17.5.27.
D.4886	Ditto 29.1.26.	Ditto 2.3.26; 30.1.27.
D.4889	Ditto 31.1.26.	Ditto 16.5.27.
D.5046	Ditto 28.2.26.	Ditto 28.5.27.
D.5051	Ditto 3.3.26.	Ditto 18.5.27.
D.5124	Ditto 14.5.26.	Ditto 28.4.27.
E.4060	Ditto 1.7.26.	Ditto 21.1.27.
E.9579	Ditto 12.2.27.	Ditto 30.6.27.
E.9508	Ditto 22.1.27.	Ditto 25.6.27.

SKY-LARK (*Alauda a. arvensis*).

D.5067	Gt. Budworth (Ches.), 15.3.26, ad., by A. W. Boyd.	Where ringed, twice May, 1927; by ringer; again released.
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MISTLE-THRUSH (*Turdus v. viscivorus*).

Z.9633	Hemsby (Norfolk), 23.4.25, young, by Miss J. M. Ferrier.	Near where ringed, 11.4.27, by A. Shepherd.
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No.	Place and Date Ringed.	Place and Date Recovered.
SONG-THRUSH (<i>Turdus ph. clarkei</i>).		
Z.3592	Malvern (Worcs.), 12.6.24, immat., by P. E. A. Morshed.	Where ringed, 13.2.27, by ringer; again released.
Z.5187	Ullswater (Westmorland), 7.5.24, young, by H. J. Moon.	Near where ringed, 26.2.27, by ringer.
Z.9886	Ditto April, 1925.	Ballyheige (Kerry), Ireland, early Jan., 1927, by T. Roche.
Y.9549	Penrith (Cumberland), June, 1926, young, by H. J. Moon.	Where ringed, 26.5.27, by M. Hetherington.
57698	Near Gt. Budworth (Ches.), 11.1.24, ad., by A. W. Boyd.	Where ringed, 22.12.26, by ringer.
Y.2013	Ditto 8.3.25.	Ditto, 10.2.27.
X.1606	Ditto 5.12.25.	Ditto, twice Jan., 1927.
X.2633	Ditto 14.12.25.	One mile away, 18.5.27, by J. Johnson, per T. A. Coward.
C.7784	Prestwich (Lancs.), 21.5.25, nestling, by G. Townsend.	Near where ringed, 21.1.27, by T. Haye.
Y.3306	Broughty Ferry (Forfar), 26.10.25, ad., by J. N. D. and T. L. Smith.	Near Dundee (Forfar), 6.5.27, by J. Don.
Y.8011	Scone Estate (Perth), 7.6.25, nestling, by Lord Scone.	Near where ringed, 24.2.27, by P. Clark, per ringer.
W.1076	Ditto 21.6.26.	Ditto, 2.3.27 (had been dead about 3 weeks).
Y.9819	Pyrford (Surrey), 14.1.26, ad., by W. P. G. Taylor.	Where ringed, 14.5.26; 21.7.26, by ringer.
BLACKBIRD (<i>Turdus m. merula</i>).		
57688	Near Gt. Budworth (Ches.), 4.12.23, ad., by A. W. Boyd.	Where ringed, twice Dec., 1923; 20.3.24; twice Nov., Dec., 1925; 17.1.26; 15.2.27, by ringer.
59112	Pyrford (Surrey), 24.5.23, nestling, by Mrs. L. E. Taylor.	Woking (Surrey), March, 1927, by W. S. Robbins.
Y.9821	Ditto ad., 19.1.26.	Where ringed, 22.3.26; 16.5.26, by ringer.
51409	Kilmacolm (Renfrew), 25.4.24, nestling, by Mr. and Mrs. R. O. Blyth.	Near where ringed, 26.8.26, by Wm. Kennedy, per ringer.
55232	Maidstone (Kent), 27.5.24, nestling, by W. Wood.	Where ringed, 9.6.27, by A. H. Urmston.
Y.3338	Broughty Ferry (Forfar), 19.12.25, by T. L. Smith.	Where ringed, 13.6.27, by J. Watt.
X.3582	Ditto 24.1.27.	Where ringed, 4.6.27, by A. Taylor.
Y.2350	Scone Estate (Perth), 26.4.25, nestling, by Lord Scone.	Near where ringed, 8.1.27, by J. A. Robertson.

No.	Place and Date Ringed.	Place and Date Recovered.
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BLACKBIRD (*continued.*)

Y.8004	Scone Estate (Perth), 19.5.25. nestling, by Lord Scone.	Dunmanway (Cork), Ireland, early Feb., 1927, by D. M. Sweeney.
Y.9458	Malvern (Worcs.), 31.7.25, immat., by P. E. A. Mors- head.	Where ringed, 13.5.27, by ringer; again released.
X.1283	Ditto ad., 15.5.26.	Ditto 20.5.27.
X.8919	Ditto ad., 4.6.26.	Near where ringed, 28.5.27, by ringer.
Z.1716	Enfield (Middx.), 24.12.25, ad., by S. G. Poock, for Lon. Nat. Hist. Soc.	Goyck (Brabant), Belgium, 25.10.26, by Baron Max de Viron, per Ch. Dupond.

WHEATEAR (*Ænanthe æ. ænanthe*).

D.4951	Seaford (Sussex), 23.5.26, nestling, by J. F. Thomas.	Near Berwick Station (Sus- sex), 19.5.27, by H. Stacey.
B.7415	Ditto, breeding female, 14.6.25.	Same valley, $\frac{1}{4}$ mile away, 14.5.27, by ringer; breed- ing.
B.7424	Ditto nestling, 29.5.25.	Same valley, 100 yards away, 21.5.27, breeding; on 29.5.27 inadvertently caught and tail pulled out and deserted nest, but found 20.6.27, on nest 120 yards away, by ringer.
D.8837	Ditto, breeding female, 7.5.27.	Different nest, 60 yards away, 23.5.27, by ringer.
F.4029	Ditto, breeding female, 29.5.27.	Different nest, 60 yards away, 19.6.27, by ringer.

REDBREAST (*Erithacus rubecula*).

B.3632	Near Gt. Budworth (Ches.), 21.8.24, immat., by A. W. Boyd.	Where ringed, twice Sept., twice Oct., 1924; Oct., twice Nov., 1925; 23.9.26; 16.2.27, by ringer.
B.9122	Ditto ad., 28.2.25.	Near where ringed, 28.6.27, by ringer.
C.6560	Ditto young, 18.8.25.	Where ringed, 14.10.25; four times between Oct. and Dec., 1926; three times Jan., 1927, by ringer.
D.3250	Ditto ad., 22.11.25.	Ditto 22.1.27.
D.5074	Ditto ad., 27.3.26.	Ditto 27.2.27.
3146	Ulverston (Lancs.), ad., 21.2.25, by C. F. Archi- bald.	Ditto 14.1.27.
B.7688	Ditto 16.8.25.	Ditto 8.8.26.
D.4917	Seaford (Sussex), 4.10.25, ad., by J. F. Thomas.	Ditto 22.11.25; 15.11.26.

No.	Place and Date Ringed.	Place and Date Recovered.
REDBREAST (<i>continued.</i>)		
B.8081	Bluntisham (Hunts.), 6.11.25, ad., by E. Peake.	Where ringed, 23.2.26; 23.2.27, by ringer.
E.4467	Ditto 16.9.26.	Ditto 17.2.27; 4.4.27.
E.4461	Ditto 21.10.26.	Ditto 11.4.27.
QZ.15	Pyrford (Surrey), 13.1.25, ad., by W. P. G. Taylor.	Ditto, 22.3.26; re-ringed with D.5587.
QZ.11	Ditto 9.12.25.	Ditto 1.4.26.
C.6673	Ditto 20.1.26.	Ditto 27.6.26; 4.7.26.
C.1137	Whitchurch (Hants.), 17.4.25, ad., by W. P. G. Taylor.	Near Basingstoke (Hants.), May, 1927, by G. Knight.
E.1660	Malvern (Worcs.), 10.7.26, immat., by P. E. A. Mors- head.	Where ringed, 20.5.27, by ringer; again released.
E.8364	Ditto ad., 15.10.26.	Ditto 9.2.27.
E.1677	Sidbury (Devon), 25.8.26, ad., by P. E. A. Morshead.	Ditto 9.1.27.
E.1680	Ditto 2.9.26.	Ditto 24.12.26.
D.6159	Ullswater (Westmorland), May, 1926, young, by H. J. Moon.	Langwarthby, 17 miles away 18.12.26, by E. M. Davidson.
D.6418	Ditto ditto.	Near where ringed, 6.1.27, by J. Cooper, per ringer.
D.5906	Near Wokingham (Berks.), 8.5.26, nestling, by J. N. Fletcher.	Hurst, Reading (Berks.), late Dec., 1926, by J. White.

HEDGE-SPARROW (*Prunella modularis*).

C.6544	Near Gt. Budworth (Ches.), 13.8.25, ad., by A. W. Boyd.	Where ringed, twice Aug., and four times Sept., 1925; 19.1.27; 28.5.27, by ringer.
C.6576	Ditto 30.8.25.	Ditto, 14.11.25; 3.12.25; 17.4.26; 19.1.27.
C.6577	Ditto 2.9.25.	Ditto, 19.9.26; 7.11.26; 28.5.27.
D.5073	Ditto 19.3.26.	Ditto 7.11.26.
E.4194	Ditto 24.8.26.	Ditto, twice Nov., 1926.
E.4196	Ditto 26.8.26.	Ditto 6.1.27; 16.5.27.
E.4223	Ditto 6.10.26.	Ditto 26.3.27; 20.5.27.
E.4224	Ditto ditto.	Ditto, three times Nov., 1926; 22.12.26; 23.1.27; 9.4.27.
D.4169	Malvern (Worcs.), 2.10.25, ad., by P. E. A. Morshead.	Ditto 5.6.27.
D.4170	Ditto 13.11.25.	Ditto 5.3.27.
E.8362	Ditto 9.10.26.	Ditto 13.6.27.
E.4460	Bluntisham (Hunts.), 13.10.26, ad., by E. Peake.	Ditto 19.3.27.
E.4473	Ditto 18.9.26.	Ditto 19.2.27.

WREN (*Troglodytes t. troglodytes*).

E.7041	Bishop's Stortford (Herts.), 15.7.26, nestling, by R. W. Hale, for Lon. Nat. Hist. Soc.	Where ringed, 17.1.27, by A. Sworder.
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No.	Place and Date Ringed.	Place and Date Recovered.
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SWALLOW (*Hirundo r. rustica*).

D.7702	Prestbury (Ches.), 14.7.26, nestling, by R. M. Gar- nett.	Near where ringed, 21.5.27, by ringer; dead some time.
D.9352	Almondbank (Perth), 15.8.26, nestling, by Lord Scone.	At sea, 150 miles N.E. of Lowestoft (Suffolk), 20.5.27, by E. Read.
E.6287	Near Leamington (War- wick), 30.8.26, young, by Miss J. M. and P. K. Chance.	Where ringed, 20.5.27, by F. E. Craven Jones.

MARTIN (*Delichon u. urbica*).

B.4512	Glen Esk (Forfar), 6.7.24, young, by H. G. Watson.	Near where ringed, Oct., 1925, by Miss Donaldson, per ringer.
C.8173	Ditto 13.7.25.	Where ringed, 29.7.26, by ringer. Found dead in new nest (no eggs).
C.8206	Ditto 14.7.25.	Near where ringed, at nest with 2 eggs, 21.7.26.
C.8209	Ditto ditto.	Ditto. Found dead in new nest; no eggs, 10.7.26.
C.8222	Ditto ditto.	Ditto 4 miles away, late May, 1926, by Miss C. Davidson, per ringer.
C.8304	Ditto 17.7.25.	Ditto, 1½ miles away; caught on nest with three young ones, 23.7.26, by ringer.
D.1584	Ditto ditto.	Ditto, 3½ miles away, 20.6.26, by Miss Donaldson, per ringer.

LITTLE OWL (*Athene n. vidalii*).

78004	Edenbridge (Kent), 29.5.26, young, by F. J. Mitchell.	Near Haywards Heath (Sussex), late Nov., 1926, by R. H. Mitchell.
75414	Malvern (Worcs.), 3.6.26, nestling, by P. E. A. Mors- head.	Batsford Park, Moreton-in- Marsh, about 25 miles away, 22.3.27, by W. N. Brooks.

TAWNY OWL (*Strix a. sylvatica*).

38146	Oakmere (Ches.), 28.4.23, nestling, by A. W. Boyd.	Lawton, Stoke-on-Trent (Staffs.), late 1925, by A. Longman.
9658	Ulverston (Lancs.), 3.7.25, nestling, by C. F. Archi- bald.	Where ringed, 23.8.26, by G. Spence.
26142	Torrance (Stirling), 25.5.26, young, by J. Bartholo- mew.	Ditto, April, 1927, by ringer.

No. *Place and Date Ringed.* *Place and Date Recovered.*

PEREGRINE FALCON (*Falco p. peregrinus*).

27624 Somerset, 9.6.26, young, by D. Macdonald. Where ringed, 25.11.26.

MERLIN (*Falco c. æsalon*).

73703 Blackstone Edge (Lancs.), 23.6.25, nestling, by A. W. Boyd. Bank of Mersey (Ches.), 6.2.27, by J. Burke.

72957 Ditto ditto. Belmont Moor, Bolton (Lancs.), 29.4.27 (breeding), by G. J. French.

73747 Knowl Moor, nr. Rochdale (Lancs.), 1.7.26, nestling, by A. W. Boyd. Ditto 8.6.27.

79713 Cumberland, 19.6.26, nestling, by R. H. Brown. Near Formby (Lancs.), 11.3.27, by S. Maddock.

77829 Ditto 24.6.25. Near Carlisle (Cumberland), late Dec., 1926, by E. U. Savage.

77782 Skiddaw Forest (Cumberland), 1.7.26, young, by Miss L. W. Streatfield. Broughton-in-Furness (Lancs.) 1.10.26, by M. L. Price.

KESTREL (*Falco t. tinnunculus*).

77033 Kirkconnel (Dumfries.), 30.6.25, young, by T. K. Craven. Straiton (Ayr.), Jan., 1927, by Sir G. Chadwyck-Healey, per *The Field*.

27242 Ditto 22.6.26. Farcet (Hunts.), 20.12.26, by H. Earl.

RR.223 Near Keswick (Cumberland), 26.6.26, nestling, by R. H. Brown. Near Wexford, Ireland, 1.4.27, by H. E. Toole.

74449 Hemsby (Norfolk), 28.6.26, young, by Miss J. M. Ferrier. Near King's Lynn (Norfolk), 12.4.27, by G. Annison.

72342 Seaford (Sussex), 8.7.26, nestling, by J. F. Thomas. Near where ringed, late Feb., 1927, by ringer.

SPARROW-HAWK (*Accipiter n. nisus*).

77838 Welton (Cumberland), 3.7.25, nestling, by R. H. Brown. Near Carlisle (Cumberland), late Dec., 1926, by E. U. Savage.

HERON (*Ardea c. cinerea*).

103992 Floriston (Cumberland), 12.5.25, nestling, by R. H. Brown. The Barony (Dumfries), May, 1927, by C. E. Galbraith.

104038 Ditto 8.5.26. Glenluce (Wigtown.), 24.2.27, by T. McWilliam.

104033 Ditto 12.5.25. Near Carlisle (Cumberland), Jan., 1927, by R. Martindale.

104043 Ditto 8.5.26. Solway Firth, Aug., 1926, by G. Walker.

No.	Place and Date Ringed.	Place and Date Recovered.
MALLARD (<i>Anas p. platyrhyncha</i>).		
39322	Southport (Lancs.), 5.6.21, nestling, by F. W. Holder.	Rittergut Pinnow, near Anklam (Pomerania), Germany, 17.7.26, by von Wiecken.
22703	Oakmere (Ches.), 17.7.24, hand-reared, by A. W. Boyd.	Where ringed, between Oct., 1926, and Jan., 1927, by ringer.
147 birds	Ditto during July and Sept., 1926.	Ditto, between Oct., 1926, and Feb., 1927.
25548	Leswalt (Wigtown), 5.3.26, ad., by M. Portal.	Where ringed, 4.1.27, by ringer.
25547	Ditto ditto.	Corsewall Estate (Wigtown), 11.1.27, by D. R. C. Buchanan.
25543	Ditto ditto.	Gotland (Baltic Sea), 29.10.26, by W. Olesan.
26961	Ditto 12.3.26.	Lake Gapern, Alster (Werm-land), Sweden, 12.8.26, by Hj. Ugglä.
25555	Ditto 20.3.26.	Near where ringed, Feb., 1927, by R. McConnell, per ringer.
25466	Almondbank (Perth), 10.7.26, young, by H. Zimmerman, for Lord Scone.	Ditto, early Feb., 1927, by ringer.
26672	Prestbury (Ches.), 1.8.26, hand-reared, by R. M. Garnett.	Scholar Green, Stoke-on-Trent (Staffs.), 28.11.26, by A. Longman.

CORMORANT (*Phalacrocorax c. carbo*).

104260	Badcall Islands (Sutherland), 17.6.26, nestling, by Miss E. C. Sharp.	Gallanach Bay, Isle of Eigg (Inverness), 31.1.27, by A. Stewart.
104254	Ditto ditto.	Loch Vaa, Aviemore (Inverness), April, 1927, by Sir S. Maryon-Wilson.
104332	Ditto 24.6.26.	Lairg (Sutherland), 25.9.26, by E. Grant.
104331	Ditto ditto.	On River Ose, near Dunvegan (Sutherland), 29.11.26 by K. Macdonald.

(To be completed.)

NOTES

HOUSE-SPARROW FEEDING NESTLING SPOTTED FLYCATCHERS.

A PAIR of Spotted Flycatchers (*Muscicapa s. striata*) had built a nest and hatched four young ones this year in a climbing rose, under a window of a house in Somersetshire. One very wet day I heard a great fluttering and a House-Sparrow (*Passer d. domesticus*) chirping loudly. On looking out I saw one Flycatcher holding on to the wing of a hen Sparrow, which was trying to escape, while the other Flycatcher, with its beak full of flies, looked on. The Sparrow flew off at last, and the young ones were fed by the parents who returned fairly frequently. After about twenty minutes the Sparrow returned, flew straight to the nest, fed the young Flycatchers and flew off, and this went on all the morning. The Sparrow took longer to find food than the parents. At first, if they found her at the nest they were very agitated and perched a yard or two off, making harsh little noises, but as the day went on they grew quieter and by the evening waited calmly till she had finished feeding and then took their turn. I could not see what flies the Sparrow brought. Twice during the afternoon she got on to the nest and seemed to be trying to cover the little ones from the pouring rain.

I left the place next day, but I had time to see that the three birds, apparently on the best of terms, were still feeding the young ones.

FRANCES POWELL.

INCREASE OF GREY WAGTAIL IN KENT.

THE Grey Wagtail (*Motacilla c. cinerea*), first found nesting near Maidstone in 1921 (Vol. XVII., p. 23), is increasing, not only nesting in its usual places in that district, but also within three hundred yards of my house. This pair is an "extra pair," as it makes four pairs that nested in 1927.

JAMES R. HALE.

PIED WAGTAIL WITH THREE BROODS.

THE Pied Wagtail (*Motacilla a. yarrellii*) is known as a regular double-brooded bird. This year, for the first time in my experience, I have found a bird having a third nest after raising two broods. Her first brood consisted of six. In the second nest there were six eggs which all hatched. This nest was in a stack of straw and unfortunately a workman, not noticing the nest, upset it, but seeing the young roll down he

made a hollow in the side of the stack and placed four of the young in it, not seeing the other two. These four were brought up all right by the parents. In July the birds made a third nest in the same stack and now the hen is sitting on five eggs.

J. H. OWEN.

[In the *Prac. Handbook*, I., p. 208, I stated that two broods were usually reared, "sometimes three." Instances of the latter are recorded by E. H. Rodd (*Zool.* 1878, p. 28); by Lt.-Col. E. A. Butler (*Zool.* 1903, p. 313), and by E. G. B. Meade-Waldo (*British Birds*, II., p. 130). Probably most of the August nests occasionally met with are third broods.—F. C. R. JOURDAIN.]

WATER-PIPIT IN DORSET.

IN *British Birds*, Vol. XIX., p. 22, I recorded the occurrence of a Water-Pipit (*Anthus s. spinoletta*) at Weymouth on April 4th and 6th, 1925. On March 19th, 1926, I saw a single bird in exactly the same spot as in 1925, and on March 20th two in the same place. These were observed up to March 29th. On April 2nd, 1927, I saw another bird within a mile of the same spot. After looking through a series of skins of *A. s. spinoletta* and *A. s. littoralis*, both from a private collection and in the British Museum—though it must be admitted that extreme types of the latter (if correctly named) much resemble the former—I have come to the conclusion that the Weymouth birds were certainly examples of *A. s. spinoletta* for the following reasons:—The under-parts were quite unmarked with any spots or streaks, a lot of white was sometimes displayed in the tail during flight, and the broad white eye-stripe was *very conspicuous indeed*. All the birds were in breeding plumage. I may add that I watched the birds at close range with strong prism glasses. This apparently regular spring migration of this species along the Dorset coast does not seem to have been yet recorded.

F. L. BLATHWAYT.

MARSH-WARBLER IN DEVON.

ON May 26th, 1925, and five subsequent days, by an estuary in south-east Devon, I had the good fortune to study at close range a Marsh-Warbler (*Acrocephalus palustris*). I sat about ten yards away while the bird poured forth its astonishing song, literally by the hour, with very few breaks. One spell of song lasted for fifteen minutes without a single pause, and during the six days, on one of which my wife was with me, I heard clear imitations of no less than nineteen species. Several times I had a good view of the hen, and confidently expected to find the nest.

Unfortunately, on June 1st I had to go away, and when I was able to revisit the spot on June 15th there was no sign of the Marsh-Warblers. What had happened during my absence I do not know. Since then, I regret to say, they have not reappeared.

This is, so far as I am aware, the first recorded instance of the Marsh-Warbler in Devon. W. WALMESLEY WHITE.

MARSH-WARBLER NESTING IN KENT.

In Vol. XX., p. 74, I recorded the breeding of the Marsh-Warbler (*Acrocephalus palustris*) in the Medway Valley in 1926. In 1927 it has again nested near Maidstone in almost the same place. This bird is certainly on the increase.

JAMES R. HALE.



UN-DOMED WILLOW-WARBLER'S NEST.

On May 16th, 1927, in company with Capt. A. W. Boyd, a nest was found in a Buxton wood that we considered was sufficiently uncommon to warrant its being recorded.

It was the nest of a Willow-Warbler (*Phylloscopus trochilus*), constructed under a stone, with the usual outer building

material of dry grass and generous lining of small feathers, but without the customary dome. Instead, the stones served as an effective roofing. Four days later, when the photograph was taken, the nest contained fully-fledged young and was much more open and conspicuous than on our previous visit.

JOHN ARMITAGE.

[I found an exactly similar nest in East Finmark in 1901.—N.F.T.]

[Nests of the Willow-Warbler have been occasionally recorded from among rocks. See *Birds of Yorkshire*, I., p. 85; also in a hole in a wall, two feet from the ground (*Zool.* 1892, p. 112). Mr. W. S. Medlicott has also recorded a Wood-Warbler's nest in a rabbit burrow which was not domed (*British Birds*, II., p. 380).—F.C.R.J.]

BLACKBIRD AND SONG-THRUSH LAYING TOGETHER.

ON April 11th, 1927, I found at Linton, Kent, a nest of a Blackbird (*Turdus m. merula*) containing two Blackbird's eggs and four of a Song-Thrush (*T. ph. clarkei*); on April 14th the nest contained three Blackbird's and four Song-Thrush's eggs.

On May 3rd the nest held three young Blackbirds and two Song-Thrush's eggs which, on examination, appeared to be infertile.

I was able to visit the nest only on the three occasions mentioned, and, unfortunately, I did not see an adult bird actually at the nest, but, whilst I was there on May 3rd, a Song-Thrush continually uttered its alarm note, and generally behaved in such a way as to lead me to believe that it was acting as parent to the brood.

WALLACE WOOD.

LARGE CLUTCHES OF ROBIN'S EGGS.

FOUR to six is the recognized number of eggs to find in the nest of a Robin (*Erithacus r. melophilus*), but as many as seven is not really rare. On two occasions I have found nine. In the first case, many years ago, the eggs might be divided into three sets of three; these differed so much in appearance as to seem like the produce of three different birds, although I am strongly of the opinion that they were all laid by one bird. Unfortunately, the nest was destroyed by vermin before I could be absolutely certain, but I only saw two Robins near the nest, which was in a very lonely lane in Shropshire. In 1916 a Robin laid nine eggs in a nest in the ivy round the

back door of Old School House at Felsted. These were all absolutely alike and were almost spherical. Five were infertile, one chick died in the shell and three young were reared. In 1927 I found two Robins laying in the same nest in a straw stack at Ley Priory; each laid five eggs and then one bird held possession of the nest. J. H. OWEN.

[In addition to the two cases of nine eggs reported by Mr. Owen, four other instances are known to me, one of which is recorded in *British Birds*, VIII., p. 74. The late E. B. Dunlop Smith found a clutch of ten eggs at Windermere, and twelve eggs in one nest (probably by two hens) were reported by Miss B. Johnson to the Carlisle Ent. and N.H. Soc. in 1895.—F.C.R.J.]

BRENT GOOSE IN ANTRIM IN JUNE.

On June 26th, 1927, I saw two Brent Geese (*Branta bernicla*) swimming in the sea near Carnlough, co. Antrim. I had with me Mr. C. B. Horsburgh, a well-known Ulster naturalist, and another companion, a keen wild-fowler, and we all identified the birds. Through my binoculars we could see the white "ring" marks on the neck. We were all surprised at seeing Brent Geese at this time of the year, as the species had left Strangford Lough (co. Down), where we usually find them in the winter, at least six weeks before.

R. L. HENDERSON.

EIDER IN CARNARVONSHIRE IN JUNE.

As there does not appear to be any record of the occurrence of the Eider (*Somateria m. mollissima*) in Carnarvonshire, it may be worth noting that on June 11th, 1927, I had under observation a fine drake which was resting on a low, half-submerged rock at the foot of the Great Orme's Head. I got to within fifty yards of the bird and had a splendid view of it through my binoculars, noting its main characters—black under-parts, tail and crown, white back, neck and throat with greenish stripes on its neck, creamy breast and straight forehead and bill. With the object of ascertaining whether the bird was in some way disabled I purposely disturbed it from the rock. It dropped heavily on the water and paddled quickly out to sea, only, however, to return to the same rock within a quarter of an hour. It was certainly less nervous than other ducks and did not object to the presence of a grey seal which put its head out of the water quite close to the bird.

RICHARD W. JONES.

[Two Eiders were recorded as seen in Colwyn Bay on March 15th, 1913, *vide* Vol. VII., p. 23.—EDS.]

FULMAR BREEDING IN DURHAM.

ON July 17th, 1927, I saw a Fulmar (*Fulmarus g. glacialis*) brooding a nestling, still in down, on the cliffs at Marsden, near South Shields. For some time Fulmars have been frequenting Marsden Bay and occasionally Frenchman's Bay, which is a little further up the coast. Though a resident informs me that they were here three seasons ago, this is the first proof available of their actually breeding here.

Last year (1926) the largest number of Fulmars I saw was about twelve in June, but as nine were reported to have been shot in mid-July and the last seen was on July 22nd, it is doubtful whether any young could have been reared.

This year (1927) on February 9th a hen with a well-developed ovary was brought to me and was said to be one of four at Marsden. The largest number seen this year was on May 1st, when eight were seen at Frenchman's and fourteen at Marsden. One pair was seen mating (May 1st), though the majority seemed to be non-breeding birds. On July 17th, when the young one was seen, only four or five others still remained.

C. NOBLE ROLLIN.

INCREASE OF GREAT CRESTED GREBE IN KENT.

WITH reference to my note on the Great Crested Grebe (*Podiceps c. cristatus*) nesting in Kent (Vol. XIV., p. 44), it is more than holding its own near Maidstone. In 1927 twenty-one birds were seen before they started nesting. A pair which I call the "original pair" had a full clutch of eggs in the first week in April. This nest was out in the open near the bank with no attempt at concealment. As far as I can judge, eight pairs nested this year. On this piece of water no Wild Duck has been known successfully to rear its young, the pike destroying the ducklings, but the young Grebes survive! I should be glad to know how they manage to escape from the pike.

JAMES R. HALE.

[The Great Crested Grebe was recorded as having nested for the first time in Eastwell Park in 1919 and it was reported in the *Kentish Express* (1.ix.23) that two broods were reared in 1923. On April 26th, 1927, I found six pairs on the water. Two birds were sitting on nests, each within a few yards only of the bank, one sheltered by an overhanging willow, the other without cover of any kind. The latter bird and nest were most conspicuous and could be seen from a great distance. —N. F. TICEHURST.]

BEHAVIOUR OF NESTING BIRDS IN FLOODS.

WITH reference to Mr. Owen's note on the behaviour of nesting birds in floods (*antea*, p. 46), the following case may be of interest.

In May, 1924, I found in Holland a nest of a Black-tailed Godwit (*Limosa l. limosa*), with four eggs, on a tussock of grass in a small pool of shallow water. During some days there was a great fall of rain and the water rose considerably, but when visiting the nest again I found it built up several inches and the eggs quite dry and warm.

The nest contained then only three eggs, but the fourth was found below the new material on the old bottom.

Later on the water went down again and the nest was then at least eight inches above the surface. FR. HAVERSCHMIDT.

WOODCOCK NESTING IN BUCKINGHAMSHIRE.

WITH reference to my note in Vol. XX., p. 26, the Woodcock (*Scolopax r. rusticola*) has again been found nesting in north Buckinghamshire. A nest of four eggs was discovered in Ravenstone Wood this spring by wood-cutters. Unfortunately, it was reported later by the keeper that the eggs had been "eaten by mice."

H. L. COCHRANE.

EARLY NESTING OF WOODCOCK IN NORTHUMBERLAND.

WE found the first sitting Woodcock (*Scolopax rusticola*) at Alnwick on March 18th, 1927. This is two days earlier than the previous recorded date for this district. H. L. McLEAN.

RED-NECKED PHALAROPES IN NORFOLK IN SUMMER.

ALTHOUGH a few Red-necked Phalaropes (*Phalaropus lobatus*) pass through north Norfolk in the early autumn, I have not heard of a spring or summer record during the last fifteen years or more. A pair, however, turned up in the Salthouse Marshes on June 5th, 1927, and stayed two days.

CLIFFORD BORRER.

SANDWICH TERN BREEDING ON NORTH RONALDSHAY.

ON page 704 of Vol. II. of *A Practical Handbook of British Birds*, under Sandwich Tern (*Sterna s. sandvicensis*), there occurs this footnote:—

"The Rev. J. R. Hale informs us that it breeds on Sanday and not North Ronaldshay, as stated in Saunders's *Manual*."

The statement in Howard Saunders's *Manual* is, however, correct, and refers to the discovery, on North Ronaldshay, of a small colony of Sandwich Terns, which the late Allan Briggs and myself found breeding there in 1893. There were, in all, eleven nests—one containing three eggs and the remainder two each. I should be glad, if it is possible, to have this correction made in future editions, as I believe that this was the first known colony in the Orkney Islands.

A. H. MEIKLEJOHN.

[We are glad to publish the above, or, indeed, any other correction of statements in the *Handbook*. Mr. Hale informs us that there was a very large colony of Sandwich Terns in Sanday in 1910 and as far as he could discover (though it is possible to have overlooked a small number) none in North Ronaldshay. Mr. Hale has, however, recently been informed by a friend that in 1925 the Sandwich Tern was not nesting in Sanday and may possibly have moved to North Ronaldshay, though as to that he has no evidence. The bird is well known to be capricious with regard to its breeding places and we regret to have made the statement, as it is evident that it has bred in both islands.—EDS.]

LITTLE TERN IN WORCESTERSHIRE.

ON June 1st, 1927, a Little Tern (*Sterna albifrons*) was hawking over the River Severn near Dowles Church. This is the first time I have observed this species in twenty-four years' residence in this parish. J. S. ELLIOTT.

[R. F. Tomes (*Vict. Hist. of Worcester*) records specimens seen both on the Severn and Avon, and states that he has examples shot on the Avon. This species was also recorded near Cofton Hackett in 1885, but is evidently a rare straggler to the county.—F.C.R.J.]

MOORHEN INCUBATING PARTRIDGE EGGS.

IN a ditch-bank by the roadside, near Haddington, a Partridge (*Perdix perdix*) began nesting. When she had laid eleven eggs she was evicted by a Moorhen (*Gallinula chloropus*) which deposited her seven eggs amongst those of the Partridge. The gamekeeper wanted the Partridge eggs for setting but gave the Waterhen time to bring them near hatching. When he went to lift the Partridge eggs he found the Waterhen dead in the nest. Both the Waterhen's eggs and those of the Partridge had well-developed chicks. The gamekeeper showed me the remains of the nest when I happened to call on him on June 20th.

WILLIAM SERLE.

IMMIGRATION OF CROSSBILLS.—From information we have received from several correspondents, it seems likely that the immigration of Crossbills this year may prove to be of unusual magnitude, as happens periodically. With a view to recording the movement adequately, we shall be glad if readers will send in notes of any Crossbills seen by them, giving particulars as to localities, numbers, dates, length of stay, food and, if possible, a comparison with immigrations in previous years.—EDS.

BLACKBIRD WITH DEFORMED BILL.—Mr. J. Bartholomew writes that he found a recently fledged Blackbird (*Turdus m. merula*) on June 4th, 1927, near Glasgow, which had no upper mandible and was blind of the right eye. There was no sign of a recent injury and the bird was in good condition, still being fed by its parents. No doubt such deformed individuals occur from time to time in many species but do not survive after the parents cease feeding them.

CUCKOO RETURNING TO SAME SUMMER QUARTERS FOR NINTH SUCCESSIVE YEAR.—Major Van De Weyer writes that the Cuckoo (*Cuculus c. canorus*) with the peculiar broken note reported in Vols. XVI., p. 107; XVIII., p. 30; XIX., p. 30; XX., p. 132, returned to Hungerford Park for the ninth successive year on May 12th, 1927.

LETTERS.

ON BREEDING OF CERTAIN DUCKS IN SCOTLAND.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. Jourdain's sceptical article in your last issue (pp. 38-40) ridicules the whole idea that the Velvet-Scoter's eggs taken in Orkney by Mr. Whitaker are authentic. As this gentleman saw the bird sitting on her eggs close to the deserted clutch, I think I was justified in using the words "proof positive," and do not consider it as rash a statement to make as Mr. Jourdain makes it out to be. Had Mr. Whitaker been an egg collector in a wholesale way, I suppose he would have taken both lots, instead of being contented with the deserted ones. Mr. Jourdain must know much better than I do that duck's eggs are not always true to type. A friend of mine, Mr. Plumb, for instance, had a clutch of Long-tailed Duck which he took himself in Iceland, which would stump almost any collector without their down, for they are little larger than those of a Pigeon.

With regard to the Long-tailed Duck's clutch taken by Gunn, the personal factor comes in, for Gunn, although a professional collector as Mr. Jourdain styles him, was as honest a man as ever lived, and far above such things as faking; moreover, I think I am right in saying that the eggs were a gift to Mr. Whitaker. If the dealer who took the first clutch was as honest a man, why is his name, and also that of

the collector to whom he sold the eggs, always so very carefully suppressed?

Mr. Whitaker writes to say that as he gave me all the particulars of both lots of eggs, he could not think for a minute of writing to any paper or magazine, as he never does any thing of the kind. I am therefore left with the job of defending him against the sceptical.

With regard to Mr. Jourdain's long diatribe on the supposed clutch of Scaup from Fife, I specially stated, not once but twice, that I was unable to verify its authenticity, which amounted to a modest way of doubting it.

H. W. ROBINSON.

LANCASTER.

[Mr. Robinson now justifies the use of the words "proof positive" by the publication of entirely new evidence, which in his previous paper was suppressed. He now states that Mr. Whitaker saw the Velvet-Scoter sitting on eggs close to the deserted clutch, and infers that the latter clutch was not taken. Later he states that Mr. Whitaker will not write on the subject to any paper or magazine "as he never does anything of the kind."

Mr. Whitaker is the author of several books dealing chiefly with birds, and when cataloguing the ornithological literature of Nottinghamshire, I came across over 150 notes contributed by him to various papers and magazines. It is hardly correct, therefore, to say that he "never does anything of the kind" and we are, I think, entitled to ask why a record of such importance should be only published on *second-hand evidence*, and why the most important part should have been omitted by Mr. Robinson when writing in *The Scottish Naturalist*. These questions demand an answer before the record can be seriously considered.

It is quite true that Ducks' eggs are not always typical, but it is, to say the least, unfortunate that the supposed eggs of Velvet-Scoter are not only non-typical but have no down by way of confirmatory evidence. What harm would have been done by taking a pinch of down and a feather or two from an occupied nest?

With regard to Gunn's clutch of Long-tailed Duck's eggs, Mr. Robinson must be well aware that, while no harm can be done by referring by name to a professional collector now dead, it is quite a different matter to mention the names of living ones, and I should be very reluctant to cause trouble in this way. Personally, I do not doubt the authenticity of either clutch, but, in the first case, the circumstances were independently investigated by Messrs. Hale and Aldworth, and this was not the case with Gunn's clutch. From information supplied by Mr. H. A. Gilbert, I am inclined to think that another clutch was taken last year in the Orkneys. If Mr. Robinson was aware that the record of Scaup's eggs from Fife was based on an error of identification, it is incomprehensible why he should have dragged it into light again and repeated it in an article on new breeding records from Scotland. Such statements render no service to science.—F. C. R. JOURDAIN.]

How Birds Live, a Brief Account of Bird Life in the light of Modern Observations. By E. M. Nicholson. London: Williams & Norgate, 1927.

As Mr. Nicholson states in picturesque language, the advance in our knowledge of birds has been somewhat rapid and blundering and in isolated salients and not along the line. This little book is intended to give some idea of the ground gained, and naturally gives little scope for originality. It is, in fact, to a great extent a resumé of modern work from the British standpoint and has the defects which one might expect to find as the result of too limited an outlook. In his preface the author says that he has not followed tradition by dragging in references to the Hoatzin or the Christmas Island Frigate Bird, and that practically all the species mentioned may be studied by an English observer at home. Yet, when we come to lay down general laws for bird behaviour, there is considerable risk in basing our premises on too limited a series of facts, and although we may be quite justified in ignoring the somewhat bizarre instances cited by Mr. Nicholson, a wider knowledge of bird life may result in an entire reversal of conclusions based on parochial observations. The territorial theory, propounded by Mr. Eliot Howard is discussed critically and its limitations are clearly shown. "Birds of Prey," says Mr. Nicholson, "are held in check by a fierce unsleeping jealousy, so strong that even in the dead season they are rarely capable of forming the smallest and simplest society" (p. 33). This is an astonishing statement, even though qualified by the admission that on migration they often travel in parties, but "In England, at any rate, sociability makes no further headway among the Birds of Prey."

These statements, if correct, have an important bearing on bird economics, for Mr. Nicholson holds that if the slaughter of such birds ceased, they could not increase indefinitely or get out of hand, but that where three pairs of Falcons have bred from time immemorial no increase can be expected. Unfortunately, the facts here are against Mr. Nicholson, and the enormous increase in the number of Peregrines since game preservation temporarily ceased and was permanently reduced, has proved beyond a shadow of doubt that where the food supply is adequate and sites are available, these birds can live at comparatively close quarters without undue friction. We know of Peregrine's eyries only a few hundred yards apart, on the English coast, while Buzzards will breed at much closer quarters. During the last year of the war three pairs of Kestrels were breeding in one hedgerow not far from Oxford, all within 200 yards. Incidentally, we would demur to the statement that the last Ospreys sacrificed their lives in "territorial" warfare. When the stock is reduced to two males and one female or *vice versa*, fighting will almost invariably ensue, but we see no reason to describe the struggle for a mate as "territorial."

That birds of prey can and do live in colonies abroad is such a well-known fact that we need only mention Lesser Kestrels, Red-footed Falcons, Black Kites, Eleonora Falcons, Griffon Vultures, etc., as instances. Some of these birds are quite as communal in their breeding habits as the Rook. We may perhaps be excused for mentioning that on Pigeon Island, every one of the thirty-five large trees on the island bore at least one and in two cases two nests of the Great White-bellied Sea Eagle (*Haliaeetus leucogaster*) according to Hume. It is true that none of the species mentioned breed in the British Isles, but if we take the British Raptores we now find a single pair of Golden Eagles nesting in a glen as a rule—while even

in St. John's days only one pair of Ospreys haunted each loch! Yet we have only to study the habits of the Osprey in North America to find that it breeds there in great numbers in certain localities—nests being often placed close to one another. Canon Tristram, while exploring the Dayats of the M'zab country, found in one palm grove no fewer than seven pairs of Golden Eagles breeding together. The habit of breeding in solitary state may then be due to local conditions rather than an innate "fierce unsleeping jealousy." Yet the study of old vermin lists from Scotland rather tends to show that even here at one time the Golden Eagle must have been plentiful. Between 1819 and 1826 on two estates in Caithness and in the county of Sutherland, rewards were paid for the destruction of 295 adult Eagles and 60 young or eggs. On the Glengarry property 275 Kites were killed between 1837 and 1840. In Sutherland alone 171 old Eagles and 53 young or eggs were destroyed from March, 1831, to March, 1834. There is also evidence of the former existence in considerable numbers of the Osprey. By the middle of the nineteenth century this murderous slaughter had told on the numbers of the birds of prey and our earliest records date from about this time, when St. John and Wolley had popularized the N.W. Highlands.

That sociable breeding is not characteristic of the American race of the Osprey only, is shown by a recent note of Herr Peus, who found no fewer than four occupied nests of Osprey as well as one of Peregrine within an area of about 120×200 metres in Germany.

Probably it will be found that the limits to the increase of a raptorial bird are the exigencies of the food supply and the provision of suitable sites. In the case described by Hume, there was a practically unlimited food supply, but every tree was occupied. Certainly the territorial limits of the Golden Eagle in Sutherland at the beginning of the nineteenth century must have been very restricted indeed!

Other statements seem to be based on somewhat slender evidence. It is extremely doubtful whether the Guillemot lives as long as the average of human life (p. 16). In comparing the fertility of the Blackbird and Willow-Wren, the former is said to lay 9 eggs in a season and the latter 5 to 7 eggs. Taking the produce of the latter as 6 to 9 of the former, Mr. Nicholson estimates the losses of the migratory Willow-Wren as about half those of the Blackbird. While it is true that there are serious risks on migration, the author seems to lose sight of the fact that half the Blackbird's life is spent in winter, while the Willow-Wren lives in perpetual spring or summer. This is also true of the Turtle-Dove as opposed to the Wood-Pigeon.

The reduction in the number of eggs in the Blackbird's clutch on the Riviera is probably due to the scarcity of food, and in Spain, clutches of 4 and 5 occur (as also in N. Africa) under suitable conditions.

Another interesting problem which receives imperfect treatment is that of the simultaneous manœuvres of flocks of certain species. In this case one possible factor seems to be entirely overlooked. Quite recently, I had an opportunity of seeing some wonderful evolutions carried out in perfect time by a flock of about 40 Jackdaws in the Gorge at Constantine. Here, owing to the close proximity of the birds, one could hear quite plainly many notes repeated from time to time which would have been quite inaudible under ordinary circumstances. Starlings, which also carry out elaborate simultaneous movements, certainly do not perform them in silence, though one must be close at hand to hear them. Racing among Swifts is always preceded by a peculiar and easily recognizable call and is accompanied by screaming notes which are not used at other times.

F. C. R. JOURDAIN.

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EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND

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FIELD-NOTES FROM EAST SUFFOLK.

BY

J. K. STANFORD, M.C., M.B.O.U., I.C.S.

THE notes which follow were made near Aldeburgh in the spring of 1927. Some are regrettably incomplete but they are placed on record, on my return to Burma, in the hope that other naturalists may be in a position to confirm those on the Corn-Bunting, Stonechat and Ringed Plover.

2. ABSENCE OF THE CORN-BUNTING (*Emberiza c. calandra*).—This bird was conspicuous by its complete absence throughout the year up to April 26th, when I was last observing, and Dr. C. B. Ticehurst further north along the Suffolk coast had only seen one or two up to then. I covered a wide area between Dunwich and Ipswich and do not think it was in any way possible to have overlooked it. In 1893, in the same neighbourhood, it was described by the late F. M. Ogilvie as a "resident and a pretty common one too," and he had specimens collected in January and March. At the same time he noticed the amazingly late date at which the Corn-Bunting commenced to breed: *e.g.*, of eleven nests found in 1892 and 1893, the earliest incomplete clutch was found on June 22nd, while of the others seven had fresh eggs between July 1st and 21st, and three between August 4th and 7th. (I have also found fresh eggs as late as August 4th, though I have seen a young one, in 1912, just able to fly on July 9th).

Mr. Ogilvie had several keepers on the look-out for these nests throughout the spring and their combined efforts failed to discover any earlier. It appears probable that, in the Aldeburgh neighbourhood, this Bunting is now only a summer migrant, as well as a late breeder, and it would be interesting to know if this is the case elsewhere on the east coast.

3. MIGRATION OF THE STONECHAT (*Saxicola torquata hibernans*).—The Stonechat in this district is found throughout the winter in its breeding-haunts, but in 1927, between February 14th and March 17th, those I saw over a fairly wide area were, without exception, single birds and all males. I did not see a female until March 18th, when I saw two pairs, and on March 20th there were a good many of both sexes alongshore in twos and threes, the total numbers seen being considerably in excess of those later found breeding in this area. I have little doubt that at least half these birds were newly-arrived migrants and possibly other observers may be in a position to state whether the sexes winter apart

or whether the males arrive in their breeding-haunts some time before the females. I have some reason for thinking the latter to be the case in this district with the Reed-Bunting (*Emberiza s. schæniclus*), Yellow Bunting (*Emberiza c. citrinella*) and Chaffinch (*Fringilla c. cælebs*).

4. NESTING OF THE COMMON CROSSBILL (*Loxia c. curvirostra*).—Though this bird has been seen in east Suffolk at constant intervals since 1888, it has only been found nesting—in a certain garden—in 1910, 1911 and 1919. In 1927 there were no signs, either of birds or "worked" fir-cones up to February 13th, when I saw a pair, of which the male was singing. On February 25th, returning after a few days' absence, I saw seven or eight, all very noisy and conspicuous, of which one pair at least were building. They made repeated journeys to a clump of lime-trees, from the branches of which the hen stripped the decaying bark (a habit previously noted in this garden in 1910), and once I found her prizing some binder-twine off a rose-walk. The hen did all the work of building, though the cock invariably accompanied her on her flights after material. The eggs in this nest were destroyed, possibly by a squirrel, and the nest, when examined, was found to consist of fir-twigs, fir-needles, grass, moss, heather-roots, lime-bark and lichen, with a piece of binder-twine, a piece of string, a long piece of wool from a carpet, and a few Ring-Dove's feathers.

This pair nested again later a hundred yards away, in a most inaccessible fir-tree, and in April the cock-bird was often seen feeding the hen on the nest. For a week or ten days I did not see the hen about at all. Though these birds were remarkably tame, and were frequently seen drinking at the eaves of a house, they appeared to be completely silent for days at a time, unless someone happened to be standing close to the nesting-tree. I have had Crossbills feeding within a few yards of me with no indication of their presence except the fir-seed-husks floating down one by one out of the tree. I failed completely to see anything more of the remaining birds, with the exception of a single hen on April 24th. Except when in flocks or disturbed at the nest, it appears quite possible to overlook the presence of Crossbills if the trees are big and the wood fairly extensive.

5. NESTING OF THE RINGED PLOVER (*Charadrius h. hiaticula*).—This bird has practically deserted the beach north of Aldeburgh but nests freely on warrens, fallows, the mud of drained marshes, and fields of young seeds, sometimes several miles inland. I have seen a nest on short turf where the

hollow was lined with rabbit-droppings, and another in a patch of horse-droppings lined with bents. In the four inland nests seen by me this year, two on sandy fallows, two on young oat-fields, there was a remarkably complete lining consisting of hundreds of small pebbles and fragments of shell which must have been collected from a considerable distance (in a nest found before the war on a stretch of smooth turf these stones were probably carried several hundred yards at least).



FIG. I. RINGED PLOVER'S NEST ON RECENTLY DRAINED MARSH.
LINED WITH BENTS.

(*Photographed by E. Fraser Stanford.*)

If the eggs are removed the nest itself forms a conspicuous white patch against the surrounding brown or green, and is nearly always, as the late F. M. Ogilvie remarked, in this area, a much more elaborate structure than those found on the beach. The habit, however acquired, does not render eggs in these situations any less conspicuous, and the eggs, like those of the Stone-Curlew, catch the eye at a distance of several yards.

In 1927 I saw a cock-bird making a nesting-scape on February 27th and two birds were sitting on full clutches on

April 4th and 5th, and another on April 17th. In other years I have very often seen eggs in the first half of April, as well as throughout the months of May, June and July. I have twice found young, about a week old, in August, once as early as April 28th, and an unfledged bird as late as October 10th. There appears little doubt that in this district the Ringed Plover is certainly double-brooded and has a long breeding-season. Out of very many occasions on which I flushed Lapwings and Ringed Plovers off their nests in 1927, I never saw a Ringed Plover *fly* off the nest, even when suddenly disturbed, whereas the Lapwing, when it has once started



FIG. 2. RINGED PLOVER'S NEST IN A RABBIT-SCRAPE, LINED WITH GRASS AND RABBIT-DROPPINGS.

(*Photographed by E. Fraser Stanford.*)

to sit, almost invariably does so and makes the nest correspondingly easy to locate.

COURTSHIP HABITS OF THE RINGED PLOVER.—The courtship of Ringed Plovers is by no means easy to observe as they are much more restless, and take much longer flights, than the Lapwings nesting on the same fields. During many hours' watching with a powerful glass, I was, however, fortunate enough, in the case of three or four different pairs, to see actions which may be worth recording. In one party on the beach on March 20th—where at least two males were contending for one female—the males ran backwards and forwards with short, quick steps, and when another male was

near, the feathers of the back and the tips of the closed wings were elevated, the tail depressed and spread out to its full extent to show the white tips of the feathers, and the whole body arched, with the head and neck drawn in, the black gorget being puffed out to nearly twice its normal size. In this crouching attitude the males ran aimlessly to and fro, for half an hour at a time, but making no real attempt to attack each other. I never saw the moving of the legs in the "rapid vibratory manner" described by Mr. Edmund Selous, but the steps taken on such occasions were very short and quick. Later, at the same place, a cock-bird kept running

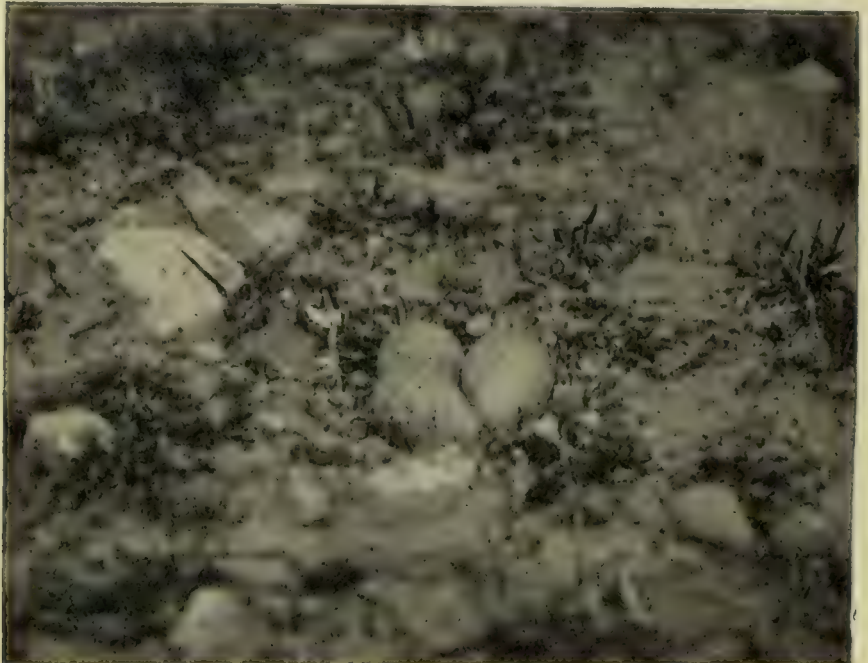


FIG. 3. RINGED PLOVER'S NEST IN A FIELD, A MILE FROM THE SEA. LINED WITH SMALL STONES.
(*Photographed by E. Fraser Stanford.*)

in front of the hen and sinking down on the beach every few yards exactly as if settling down on a nest. Occasionally, while brooding in this way, he would tilt himself forward on to his breast with the closed wing-tips pointing up almost vertically over his back, the tail depressed and the legs scratching out sand and stones behind him. The indifference displayed by the hen to this performance was as noticeable as it usually is in the case of the Lapwing's "rolling" on the ground.

On several other occasions in April, I saw cock Ringed Plovers settle down and appear to brood for several minutes

exactly as if they were on a nest : in one case the bird kept turning round and round on one spot, and twice at least this action was followed by an attempt at coition, the male running towards the female, with head and neck bent low and drawn in, and the tail and wings "tipped up," so that he appeared to be almost standing on his head, an attitude somewhat similar to those occasionally adopted by the Stock-Dove and the Stone-Curlew. I twice saw the hen of another pair run away into a furrow and apparently hide from the cock-bird, crouching flat on the ground with neck outstretched and almost invisible. On approaching her, the



FIG. 4. RINGED PLOVER ON NEST ON A ROADWAY ACROSS A MARSH.

(*Photographed by E. Fraser Stanford.*)

male ran round her with head down, back humped and the tail-feathers widely spread. The expansion of the black gorget-patch was very noticeable on all these occasions.

Both sexes appear at times to take part in the love-flight so well described by Mr. Selous, which often covers nearly a mile of ground and in which two or three birds will cross and re-cross each other with their bodies twisting from side to side and soft beats of their fully-expanded wings. The double note, if heard on these occasions, as I have, at a few yards' range, has a remarkably vibrant quality and the throat appears to be swelled out. The whole performance is very

similar to a somewhat rarely-seen nuptial flight of the Lesser Redpoll and the Greenfinch in the breeding season.

COURTSHIP HABITS OF THE LAPWING (*Vanellus vanellus*).—The “rolling” antics of the male Lapwing on the ground in spring have been very fully described by Mr. Edmund Selous,* and I have little to add, but, after watching closely some scores of Lapwings performing in this manner in 1927, I can say with certainty that not a single one ever turned “round and round,” as they are popularly supposed to do. In the majority of cases, there was no female near at the time, and if there was, she appeared to take very little notice of the display. There appear to be two distinct phases in this “rolling,” in the first of which the male, with head and breast lowered almost to the ground, rocks backwards and forwards with his tail raised high in air and the chestnut under-coverts much puffed out, while in the second, like the Ringed Plover, he sinks down on his breast on the ground, with the tail depressed and wagging rapidly from side to side and the wing-tips pointing vertically upwards. This last action, as Mr. Selous remarked, closely resembles that of coition. On three or four occasions, I saw a hen run up to the cock-bird immediately after this performance and nestle in the exact spot where he had been, where she kept pecking at the ground and “rolling” in a milder degree herself. While this was going on the cock stood a few inches away, bowing head downwards and also making little pecks at the ground. In one pair, seen at close range with a very powerful glass, both appeared, while making these pecks, to be throwing something sideways over their shoulders.

Unfortunately, it was impossible, for various reasons, to locate the exact spots where this rolling took place, but I feel sure that if the site of the actual “false nests” on any Lapwings’ breeding-ground could be marked with sticks towards the end of March, it would be found that these rolling exercises took place day after day at approximately the same spot. My experience is that these performances are going on continually throughout March and April, but comparatively few “false nests” are found considering the number of breeding-pairs. Nearly all these “nests” are considerably larger and deeper hollows than that selected for the eggs, which suggests that they are used on numerous occasions for the same performance.

One other point may perhaps be mentioned. I can endorse Mr. Farren’s statement,† quoted in the *Handbook* (Vol. II.,

**Bird Life Glimpses*.

† This has since been confirmed by other observers; cf. *B.B.*, XX., p. 166, etc.—EDS.

p. 549), that the male Lapwing incubates. I saw this distinctly in the case of two pairs, the sexes being easily distinguishable in a fairly good light. The hen of one pair was wont to remain on the nest, sometimes fast asleep, within seventy yards of a lane along which people were constantly passing, but the cock, when on the nest, was much warier.

MIGRATION.—Little migration was observable on this coast in March and April, except for the usual west to east passage of *Corvidæ*, mainly Rooks and Jackdaws, on March 19th, 21st, 27th, 28th, and April 5th. Some were coasting north on March 28th and April 17th, and Hooded Crows on March 20th and 29th. On March 28th I saw a very big flock of Hooded Crows mobbing two large *Raptores*, one of which was certainly a Rough-legged Buzzard (*Buteo lagopus*). On this coast, the "jumping-off place" for very large numbers of *Corvidæ*, I am inclined to think that the damage done by them to Lapwings' eggs is somewhat exaggerated, judging by the number of Lapwings and Ringed Plovers I found sitting on full clutches early in April on an estate where egg-collecting no longer takes place. On March 27th a very large flock of Rooks and Jackdaws made three separate attempts to migrate before a strong westerly breeze, and on each occasion became alarmed when well out to sea (apparently at threatening weather in the distance), and struggled back to land again, finally circling away to the N.E. at a great height and unwilling to go before the wind.

A very large influx of Mallard (*Anas platyrhynchos*) occurred alongshore between February 26th and March 1st at a time when the local breeding-birds were all paired, while the Shoveler (*Spatula clypeata*), in east Suffolk almost entirely a spring migrant, was back in its breeding quarters by mid-March and the Garganey (*A. querquedula*) by April 18th.

The only coasting migration visible was of Linnets and Chaffinches to the south, alongshore, on March 20th, and of Linnets to the south on April 5th, and a few to the north on April 16th, while considerable arrivals of Linnets, Lesser Redpolls and Goldfinches seemed to occur about April 15th, though no actual migration was seen. A big influx of Fieldfares was observable on April 9th, and both they and the local birds left next day, though I saw a flock a few miles away as late as April 18th. The usual April arrival of Woodcock, in places close to the sea where they were not apparently breeding, was reported from three different areas on April 6th, 14th and 15th. With the exception of the Wheatear (March 20th) and the Turtle-Dove (April 24th), summer migrants in this area seemed scarcer and later than usual.

ON A SOARING CORMORANT.

BY

DONALD GUNN.

ON July 7th, 1925, I visited the reservoir at Staines. As I approached from the western side, a Cormorant (*Phalacrocorax carbo*), alarmed at my sudden appearance, rose under the near bank and flew to the far side of the reservoir, where it turned and began to sweep round in large circles. Accepting these as tours of inspection preparatory to alighting, I had no doubt the bird would settle again; and it was not till I had watched it for some time that I grasped the fact that it was slowly mounting in an enormous but shallow spiral.

My sight is exceptionally good. The day was clear; a blue sky with large cumulus clouds forming a background which, though not uniform, was favourable to exact observation. I therefore watched the bird carefully in order to see what altitude it would reach, and what direction it would take when it moved off after having gained the desired elevation.

But in vain. When last seen—an infinitesimal speck against a white cumulus cloud—the bird was still ringing upwards with, so far as I could judge, the axis of its spiral still vertical.

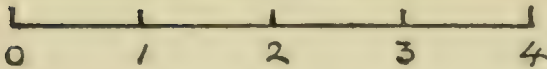
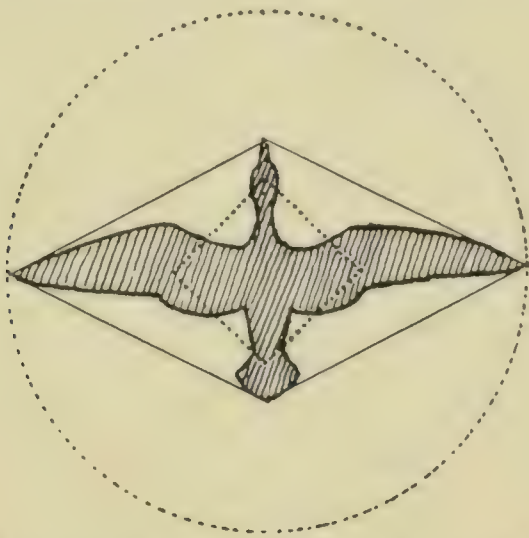
What height did the Cormorant reach before I lost it? Perhaps that is an idle question. Seton Gordon has said (*Nineteenth Century*, April, 1927) that "For an Eagle to be invisible it must be, at a conservative estimate, at least 8,000 feet in the air"—an opinion I assume to be based on the experiments of Lucanus (*Die Ratsel des Vogelzuges*).

We are told that when an object is at such a distance that it subtends a visual angle of one minute, it is easily seen by the normal eye though its form may be unrecognizable. That rule was laid down for use under conditions of good indoor illumination and, of course, applies only to an object, such as a square or a disc, having an average diameter of that magnitude. But a flying bird when overhead approximates more nearly to the form of a rhombus which has one diagonal twice the length of the other: the surface-area of the bird would, however, be far less than that of a rhombus of the same width, and, consequently, its visibility also far less.

Frohawk has stated (*Field*, 14 Sept., 1901) that the Shag, which he has measured, has a wingspread of forty inches; and he judges the Cormorant to have a spread of probably about four feet six inches. Montagu gives the "width"

of an unusually large specimen as four feet eleven inches. Other writers all place it between four and five feet. Let us accept the lowest estimate and call it four feet. A soaring bird with a wingspread of four feet would be enclosed by a rhombus of four feet by two feet, and might perhaps have a visibility-value even as low as a square of one foot along the sides.

Granting that surmise for want of something better, then my one-foot-square Cormorant would still be plainly visible, though only as a spot, when the visual angle it gave was reduced to one minute—that is, at a distance of 3,500 feet from my eye. And allowing that the bird was half a mile away from my position when it began to rise (which would



be very nearly accurate) and that it mounted straight upwards, it would be 3,500 feet from my eye, and, therefore, still visible, when it had risen vertically through 2,300 feet.

That may or may not be true. The imponderables are too many to allow of much certainty. The good outdoor light would increase visibility; irradiation might cut it down. Still more important, the bird might have drifted down wind—must have done so unless it was intent on keeping its spiral truly vertical—and this factor has a vital bearing on the matter of its position. There was a north-westerly breeze blowing at the time, and, allowing it a speed of only fifteen miles an hour, the Cormorant's sag to leeward (away from me) would be at the rate of half a mile in two minutes.

A drift at that speed, therefore, would have doubled the bird's distance from me in two minutes and it would have been lost to sight very quickly. So I must assume that it knowingly kept the axis of its spiral vertical (as, indeed, it seemed to me to do) and did not drift while circling—a plan adopted by the Vulture as the easiest method of inspecting a large area of ground.

But, whether the postulate I have hazarded is accepted or not—that the bird rose 2,300 feet before I lost it—I am not concerned to show that the Cormorant is able to soar to any particular height. I am satisfied that it would have no trouble in rising to far beyond the limits of human vision. And I can confidently state that, under the conditions then existing, the bird I watched must have gone to an enormous height before it disappeared.

A question of more general interest that I would like to put for ornithologists to answer is: Why did the bird behave in that way and expend the energy necessary to mount to such a height?

There are birds, many of them, which almost pass the daylight hours on the wing; others, such as the Cranes and Pelicans, that spend long periods in evolutions at a great height. A bird may be so constituted that, like the Skylark, soaring forms part of its work-a-day impulses. Many powerfully winged birds, such as the Hawks, "are prone to give exhibitions of their soaring powers in the springtime, either as part of nuptial display or as a mere outlet for energy."

But why should a Cormorant, of all birds, when alone on a July day go through such a performance? And if it is a habit normal to the Cormorant why has it not been observed and commented on more often?

It has been noticed and recorded on at least two occasions, both referred to by Hartert in his article on the Cormorant in Kirkman's *British Bird Book*.

The two instances were reported by:—

1. G. Mathew. (*Zoologist* for February, 1875, p. 327.)
2. F. Davies. (*Field* for 29th January, 1901.)

The first of these, however, differs in certain important details from the occurrence I watched at Staines, for two birds took part in it; they did not pass out of sight; and their evolutions terminated in a dramatic tumble seaward. Their performance, therefore (although its date was November), had much the character of a pairing demonstration, and I will exclude it without further discussion. But the second

case is worth giving at greater length for it almost echoes my experience.

On a clear day in June a Cormorant was seen to rise from a Welsh river and to ascend in a regular spiral "until it became a mere speck and finally disappeared from view," and the observer remarks that though Cormorants were common enough in those parts, he had "never seen one—or, indeed, any other bird—soar to such a height." Now, the place where this was seen (Newcastle Emlyn) is only some fifteen miles from the sea of Cardigan Bay; so that, in order to get its bearings by a sight of salt water, a Cormorant would need to ascend to only some three hundred feet.

But, in spite of that, I am going to put forward the hypothesis that in these cases the object of the bird in mounting to so great a height is, in fact, to extend its range of vision by a proportionate expansion of its "sea-horizon"; for that is the only motive I can suggest. More than that, I must acknowledge that when I watched my bird soar I felt convinced, rightly or wrongly, that it was mounting to gain a wider and yet wider view.

And, though it may sound absurd to suggest that this Cormorant was looking for the open sea from Staines, I have no doubt that by the time it passed out of my sight it had the mouth of the Thames well in view. For the Nore lightship is but fifty-six miles in a direct line from the point where I stood, and that radius of vision would be gained with an elevation of some 2,200 feet.

RECOVERY OF MARKED BIRDS.

(Concluded from p. 60.)

No.	Place and Date Ringed.	Place and Date Recovered.
TEAL (<i>Anas c. crecca</i>).		
76154	Longtown (Cumberland), 3.3.25, ad., by Sir R. J. Graham.	Medway Marshes (Kent), Sept., 1926, by L. Biggs.
76164 (71690)	Ditto	31.3.23. Where ringed, 3.3.25, by ringer, and Varberg, Swe- den, 27.8.26, by E. Ander- son.
76196	Ditto	3.3.25. Lochend, near Glasgow, late Jan., 1927, by W. A. Sangster.
76433	Ditto	25.8.25. Isle of Ameland, Holland, 15.10.25, by D. Woltman.
76464	Ditto	3.9.25. In decoy pond on Island of Föhr (Schleswig-Holstein), 26.9.26, by J. L. Hassold.
76457	Ditto	ditto. Shercock (Cavan), Ireland, Nov., 1926, by W. McCul- lough.
78301	Ditto	19.9.25. River Trent, near Willington (Staffs.), late Jan., 1927, by H. St. John Raikel, per <i>The Field</i> .
78353	Ditto	11.11.25. Castlebellingham (Louth), Ireland, Jan., 1927, by B. Campbell.
78431	Ditto	6.1.26. Thornhill (Dumfries.), 7.2.27, by H. S. Gladstone.
78419	Ditto	ditto. Castle Semple, Loch Winnoch (Renfrew), 22.1.27, by C. J. Hirst.
78508	Ditto	5.3.26. Downpatrick Marshes (Down), Ireland, 21.12.26, by The Hon. C. Mulholland.
78516	Ditto	9.3.26. Ballinasloe (Galway), Ireland, 27.2.27, by M. Kilcommons.
69644	Leswalt (Wigtown) ad., by M. Portal.	10.2.26. Where ringed, 14.10.26, by ringer.
69645	Ditto	ditto. Lochinch, 10 miles away, 20.8.26, by Earl of Stair, per ringer.
69648	Ditto	20.2.26. Where ringed, 1.12.26, by ringer.
69650	Ditto	17.3.26. Near where ringed, 30.9.26, by R. McConnell, per ringer.

No.	Place and Date Ringed.	Place and Date Recovered.
SHAG (<i>Phalacrocorax a. aristotelis</i>).		
104277	Handa (Sutherland), 18.6.26, nestling, by Miss E. C. Sharp.	Balintore, Fearn (Ross), 4.4.27, by G. Henderson.
104285	Ditto ad., ditto.	Loch Shell, Isle of Lewis, early March, 1927, by G. A. Ferguson.
104327	Badcall Islands (Sutherland), 24.6.26, nestling, by Miss E. C. Sharp.	Killiegray Island, Sound of Harris, 26.11.26, by K. Campbell.
GANNET (<i>Sula bassana</i>).		
103848	Ailsa Craig (Ayr.), 28.7.24, young, by D. Macdonald.	Off Hook Head (Wexford), Ireland, 3.6.27, by A. Whatling.
101196	Bass Rock, Scotland, July, 1926, young, by H. W. Robinson.	Fécamp (Seine Inférieure), France, early Nov., 1926, by E. Lafitte.
101041	Ditto Aug., 1926.	Argenton, Porspoder (Finistère), France, 31.10.26, by M. P. Salaine.
WOOD-PIGEON (<i>Columba p. palumbus</i>).		
25671	Ullswater (Westmorland), June, 1925, young, by H. J. Moon.	Wreay, Carlisle (Cumberland), Feb., 1927, by R. Norman.
77704	Torrance (Stirling), 15.7.25, young, by J. Bartholomew.	Where ringed, March, 1927, by ringer.
79492	Ditto 3.5.26.	Bishopbriggs, near Glasgow (Stirling), 12.4.27, by T. Bonar.
77226	Facombe, near Andover (Hants.), 10.8.25, nestling, by P. K. Chance.	Where ringed, 19.4.27, by C. J. Carter.
77567	Scone Estate (Perth), 17.5.25, nestling, by Lord Scone.	Pitroddie, Errol (Perth), spring, 1926, by A. Bon- throne.
77628	Ditto 27.4.26.	Near where ringed, 16.8.26, by J. Roger & Son.
TURTLE-DOVE (<i>Streptopelia t. turtur</i>).		
72945	Near Gt. Budworth (Ches.), 19.8.24, ad., by A. W. Boyd.	Near where ringed, 8.7.25; 9.6.26; 15.6.27; re-ringed 73773.
73706	Ditto 7.7.25.	Where ringed, 17.6.27, by ringer; re-ringed 73775.
73781	Ditto 25.7.26.	Ditto, 13.6.27. Captured when displaying to ♀ in 1926 and ♀ also ringed. In 1927, caught in company with different bird—possibly new mate.
73740 (73708)	Ditto 8.7.25.	Ditto 26.6.26; 2.8.26; 13.6.27; Originally ringed 73708.

No. Place and Date Ringed. Place and Date Recovered.

REDSHANK (*Tringa t. totanus*).

- W.2924 Ainsdale (Lancs.), 13.6.26, Barmouth Estuary (Merion-
nestling, by F. W. Holder. eth), early Nov., 1926, by
J. A. Pilgrim.

GREENSHANK (*Tringa nebularia*).

- B.8377 Sutherland, young, 6.6.26. Near Clonakilty (Cork), Ire-
land, 17.10.26, by D. Mac-
Carthy.

CURLEW (*Numenius a. arquata*).

- 77432 Near Caldbeck (Cumber- Near Carlisle (Cumberland),
land), 5.6.25, nestling, by 22.6.27, by J. Benson.
R. H. Brown.
79714 Welton (Cumberland), Near Ballymoney (Antrim),
18.6.26, nestling, by R. Ireland, winter 1926-7, by
H. Brown. H. Forgrave.
79018 Skirwith (Cumberland), Near Ballinasloe (Galway),
3.6.26, nestling, by R. H. Ireland, 11.11.26, by J.
Brown. Hanney.
RR.222 Warnell Fell (Cumberland), Belmullet (Mayo), Ireland,
26.6.26, young, by R. H. 10.11.26, by M. McHale.
Brown.
77619 Logiealmond (Perth), Near Belmullet (Mayo), Ire-
land, 21.6.26, by J. Duncan for land, 10.2.27, by G. A.
Lord Scone. Massey.

WOODCOCK (*Scolopax r. rusticola*).

- X.6947 Kinloch, Meigle (Perth), Near where ringed, 6.11.26,
9.5.26, young, by C. W. by ringer.
Walker.
Y.3621 Abbeystead, near Lancaster, Mount Gallan, Inagh (Clare),
June, 1926, young, by H. Ireland, 16.2.27, by R.
W. Robinson. Tottenham.
X.4739 Bowhill, Selkirk, 24.7.26, Philiphaugh, Selkirk, 23.12.26,
nestling, by — Warwick by A. L. Butler, also Major
for Lord Scone. Strang-Steel in *The Field*.

SANDWICH TERN (*Sterna s. sandvicensis*).

- Z.1772 Tentsmuir (Fife), 30.6.23, Goulven Bay (Finistère),
young, by H. G. Watson. France, 20.9.26, by Com-
mandant Hemery.

LESSER BLACK-BACKED GULL (*Larus f. affinis*).

- 27449 Bowness Moss (Cumber- St. Louis (Senegal), W. Africa,
land), 4.7.26, nestling, by March, 1927, by C. Millet.
R. H. Brown.
26393 Foulshaw (Westmorland), Préfailles (Loire Inférieure),
10.7.26, young, by H. W. 3.5.27, by M. Bassereau.
Robinson.

RAZORBILL (*Alca torda*).

- 79520 Handa Island (Sutherland), Near Haugesund, Norway,
29.6.26, young, by E. 21.9.26, by H. Naesheim.
Cohen.

NOTES

THE 1927 IRRUPTION OF THE CROSSBILL.

FROM the information already to hand it is evident that the irruption of Crossbills (*Loxia curvirostra*) to this country this summer is on a very large scale.

Summaries of the notes received are published below and these are arranged so far as possible in geographical order. It is to be hoped that our readers will continue observations and forward their notes on the subject, as it is important that the movement should be fully recorded. Notes should state locality, date when first seen, approximate number, dates of any noticeable increase or decrease, or entire departure, and nature of food. It should also be stated if and when Crossbills have previously been noted in the locality. It might also be stated in what proportion adult males occur.

Without attempting to summarize the information at this stage, it may be mentioned that from the observations already received, the migration would appear to have been more extensive in a westerly direction than in the great irruption of 1909 (see *British Birds*, Vol. III.).

H. F. WITHERBY.

SCOTLAND.

ORKNEY.—On July 24th Mr. D. J. Robertson saw a flock of from thirty to forty near the cliffs at Skaill on the west coast of the mainland of Orkney. No adult males were seen. The birds seemed to be feeding on seeds of the sea-pink.

CAITHNESS.—On July 10th and again on 13th and 14th Mr. C. Oldham saw three apparently young birds feeding on the sward on the treeless Holburn Head at Scrabster. On July 11th Mr. Oldham saw nine (including two red birds) in bracken and ling at Dunnet Head, while on the 14th he saw three in another part of the same headland.

SUTHERLAND.—On July 22nd Mr. Oldham saw seven at Golspie.

INVERNESS-SHIRE.—From July 23rd to 27th Mr. Oldham saw several parties of from six to twenty or more in Strathnairn, and in the district east of Loch Ness and southward to Fort Augustus. Some were in Scots fir, some in birch forest. (N.B.—It is possible that some of these were of the Scottish form.)

ABERDEENSHIRE.—In the first week of August Mr. P. Mackenzie observed a very large increase of Crossbills in the Balmoral district. Birds of the resident form were in their usual small numbers until early July, when a certain number of young were observed. The large numbers (fifty to sixty being seen in flocks) which arrived early in August were evidently not the resident birds and were either oversea immigrants or represented a movement of the Scottish form from another district.

ENGLAND AND WALES.

WESTMORLAND.—On July 10th Mr. A. Astley saw five in a Scots fir at Ambleside, and on July 21st and for several following days three in larch trees at Bowness-on-Windermere.

YORKSHIRE.—On August 1st Mr. W. S. Medlicott saw a single bird, and on the 10th a flock of about forty at Goathland. The birds were chiefly in spruce and alder.

DENBIGHSHIRE.—On July 19th Mr. M. V. Wenner saw six at Llangwm in larch and fir. Two were adult males.

CARNARVONSHIRE.—On August 12th Mr. H. E. Forrest received a young male from Menai Bridge, where two parties were noticed.

MONTGOMERYSHIRE.—On July 31st Mr. J. S. Elliott saw a few at Churchstoke, feeding on larch.

BRECONSHIRE.—On July 7th Commander A. T. Wilson saw a large number in Scots fir at Garth. The next day no birds were seen.

SHROPSHIRE.—On July 9th one caught at Broseley is recorded by Mr. H. E. Forrest, and from the 26th to the end of the month a number are reported from various places by Mr. Forrest and Mr. J. S. Elliott, especially between Broseley and Craven Arms.

WORCESTERSHIRE.—On July 21st Mr. J. S. Elliott saw eleven at Dowles, and these increased to sixteen which were still present on August 8th. On July 23rd Mr. E. St. George Betts saw a flock of forty to fifty near Rednal feeding on larch. Most had gone in about a week, but a few were still there on August 8th.

HEREFORDSHIRE.—On July 30th Mr. H. A. Gilbert noted two small flocks at Bishopstone. One was feeding on peas and others on spruce shoots.

GLOUCESTERSHIRE.—From July 17th to 28th Mr. R. G. Willan daily saw flocks of twenty and upwards in the Forest of Dean. They appeared to be feeding entirely on larch seeds. Similar flocks were seen by the same observer near

Symonds Yat on the 28th. On July 28th Mr. J. S. Elliott noted a few at Stanton near Broadway.

MONMOUTHSHIRE.—In the first week in August Mr. R. G. Willan saw considerable numbers in the Crown woods at Tintern, feeding on larch-seed.

SOMERSETSHIRE.—About July 10th and subsequently to August 11th Mr. F. H. L. Whish saw a number at Lympham in flocks of six to twenty, feeding on fir cones.

DEVONSHIRE.—On August 14th and 16th Mr. B. J. Ringrose saw one on Lundy Island, feeding on thistle-seeds. On August 9th Mr. D. Seth-Smith saw some on Berry Head, south Devon, and a few days later quite fifty there, feeding upon thistles. Most were young birds.

HAMPSHIRE.—On June 27th Major M. Portal reports some at Owlsbury in larches, and on August 6th about twenty near Wickham. On August 2nd Mrs. K. M. Chilver saw two in an apple tree at Bournemouth, where also the Rev. F. C. R. Jourdain saw two on August 17th. On August 5th and to the 20th Mr. M. C. W. Dilke had up to sixteen in his garden at Fawley. They were apparently feeding on Scots fir. On August 3rd Mr. A. Arnold saw a flock of about twenty at Rookesbury Park and they were there up to the 18th. On August 8th the same observer saw a flock at Hambledon.

SURREY.—On August 4th Major M. Portal reports about fifteen in the Pensham district. On August 5th Mr. A. Arnold reports some from Frensham. On July 15th Mr. C. W. Colthrup noticed a large influx in the district where he reported Crossbills breeding in 1926 (*antea*, Vol. XX., p. 273), and where they bred again in 1927. On July 22nd and on various dates up to August 3rd Mr. Colthrup saw some in his garden at East Dulwich.

SUSSEX AND KENT.—On July 13th Mr. Collingwood Ingram saw some near Battle and has since observed them (usually in parties of from three to twelve) in a number of localities in Sussex and Kent, including Thanet.

BERKSHIRE.—On July 21st four were seen by Mr. J. S. Reeve near Cholsey.

BUCKINGHAMSHIRE.—On August 14th Mr. C. Oldham saw two small parties at Aston Clinton. These were in spruces and were feeding, not on cones, but on something among the foliage.

HERTFORDSHIRE.—On August 2nd Mr. A. P. Meiklejohn saw eleven near Wheathampstead in fir trees. On August 7th Mr. Oldham saw about a dozen on Northchurch Common in Scots fir.

NORFOLK.—On July 2nd Mr. A. P. Meiklejohn saw a small flock near Holt in a pine wood, and on the 28th another small flock, but he is informed by Mr. H. T. Linton that Crossbills have been in the district since the spring.

LINCOLNSHIRE.—On July 14th a flock of about fifty were reported to Mr. J. S. Reeve in his garden near Lincoln, and on the 25th he saw twelve there, at least one being an adult male.

IRELAND.

ANTRIM.—On July 25th Mr. J. Cunningham saw half a dozen (mostly in immature plumage) at Fernhill, Belfast, and on August 1st he saw some at Parkmore feeding in spruce trees.

LONDONDERRY.—On July 31st Commander J. Chichester-Clark saw a large number on the shores of Lough Neagh.

DONEGAL.—On July 14th, and subsequently, Mr. C. V. Stoney saw a flock of from six to ten at Raphoe. They were feeding on larch. Mr. Stoney also reports some from near Ramelton, and from Portsalon near the mouth of Lough Swilly.

MONAGHAN.—On July 19th Mr. H. McWilliam reported three from Monaghan, which were "taking off the tips of a fir tree."

UNUSUAL SITE OF CHAFFINCH'S NEST.

LAST year I reported in *British Birds* (Vol. XX., p. 105) an unusual nesting site of a pair of Goldfinches (*Carduelis c. britannica*) in the ivy growing on one of the bridges which span the River Dart, Devon. This year (1927) a pair of Chaffinches (*Fringilla c. caelebs*) built their nest on a stone projecting from the same bridge. One very small piece of ivy was overhanging the stone, otherwise there was no attempt at concealment and the nest was quite visible from some distance. The nest was about half built when I first discovered it, and I watched it for a few minutes almost daily until it was completed. Eggs were duly laid and the bird sat on them for several days, but unfortunately the nest and eggs came to an untimely end. Both, the nesting sites of the Goldfinch and the Chaffinch, were remarkable for the fact that there are three orchards only a few yards from the bridge, in any of which one would expect them to build.

STANLEY PERSHOUSE.

REJECTION OF CUCKOOS' EGGS BY REED-WARBLED.

THE Rev. F. C. R. Jourdain writes in "A Study on Parasitism in the Cuckoos" (*Proceedings of the Zoological Society of London*, July 21st, 1925, page 648):—

"Most field-workers occasionally come across cases in which either the nests are deserted by the fosterer after the Cuckoo's egg has been deposited or sometimes the Cuckoo's egg is ejected, and in that case it is no doubt very frequently overlooked. Another plan is for the fosterer to build over the original nest and to bury the intruding egg in the foundation.

"One of the most remarkable instances of this kind is that recorded by the Rev. J. R. Hale. On June 15th, 1893, he found a bulky Reed-Warbler's (*Acrocephalus scirpaceus*) nest with four fresh eggs. On taking these out, a Cuckoo's egg was just visible embedded in the lining. When this was removed, a Reed-Warbler's egg was found, and still lower a sixth Reed-Warbler's egg; below this again was a seventh Warbler's egg with another egg of the Cuckoo. Carefully taken to pieces, the structure proved to consist of three or, more exactly, two and a half nests built one over the other, the uppermost being merely a new rim with a slight lining. The Cuckoo's eggs were not of the same type."

I am glad to be able to record another instance of a Reed-Warbler behaving in the same way.

My friend, Mr. Ernest E. Elgar, writes to me as follows:—

"In company with Mr. W. Mead Briggs, on June 10th, 1889, near Sandwich, Kent, I found a Reed-Warbler's nest containing four eggs, but I thought the nest rather unusual and cut the reeds and took it out. When we sat down to lunch, we were examining the nest and I noticed something under the bottom which turned out to be a Cuckoo's egg. We left it there and when we got home we carefully cut the nest in halves vertically, and found the Cuckoo's egg and one Reed-Warbler's under the seat of the nest and came to the conclusion that the old birds had had something to do with a baby Cuckoo before, so when they found this egg in their nest they covered it in, raised the sides of the nest and then completed the clutch, but why they did not turn the Cuckoo's egg out of the nest beats me!

"The nest with the two eggs under the false bottom and four eggs on the top were exhibited for several years at the Natural History Museum, but last time I went there it had gone and I could not find out anything about it."

To appreciate thoroughly this additional evidence that the Reed-Warbler and other fosterers in many cases do all that they can without desertion of nest—to get rid of the Cuckoo's egg—I would refer those interested to Mr. Jourdain's "Study on Parasitism in the Cuckoos." JAMES R. HALE.

REJECTION OF CUCKOO'S EGG BY TREE-PIBIT.

ON May 25th, 1915, I found the nest of a Tree-Pipit (*Anthus t. trivialis*) in an orchard in S.W. Kent. It contained five eggs of the black-blotched type. Half buried in the rim of

the nest was the egg of a Cuckoo (*Cuculus c. canorus*) of the grey Pied Wagtail-type, quite unlike those of the Tree-Pipit. The question of rejection of the Cuckoo's egg by the Tree-Pipit at once occurred to me and in order to test it I replaced it in the nest. I was away the next day, but on visiting the nest on the 27th I found the Cuckoo's egg lying well outside beyond the rim of the nest. I replaced it again and on the 31st received a postcard from my father, whom I had asked to visit the nest in my absence, that the egg had again been ejected.

N. F. TICEHURST.

SNOWY OWLS SEEN IN INVERNESS-SHIRE.

ON the afternoon of May 1st, 1927, Mr. J. C. Harrison, the bird artist, and I were walking up Glen Feshie, a glen that leads into the Cairngorms south of Kingussie. There were five inches of snow on the ground, but the sky was cloudless and the sun very warm. We were passing beneath a high cliff where a pair of Ravens were nesting. The old birds had seen us and circled over head, but had now settled down. Suddenly one of them flew out excitedly, and, following with our eyes the line of its flight, we saw three white birds drifting—for that exactly describes their progress—down the glen and steering north-north-west. They were about 900 feet above us. What impressed us first was their wonderful whiteness and the almost uncanny gliding swiftness of their flight. They were quite unlike any British bird. All too soon they had gone behind the hill. Mr. Harrison had his glasses ready and was quite positive that the birds were Snowy Owls (*Nyctea nyctea*). A sketch which he kindly presented me with afterwards shows their features unmistakably. This occurrence is interesting in view of the large southward migration of Snowy Owls which occurred in the north Atlantic in the late autumn of 1926.

SETON GORDON.

LITTLE OWL NESTING IN RAILWAY POINT BOX.

A MOST curious place for a nest of the Little Owl (*Athene n. vidalii*) has just come to my notice. The selected spot is on the railway track at a small country station of the L.M.S. Railway in north Staffordshire. The nest is in what the railway officials term the "truncheon box," covering a disc at railway points. This box has rails close to each side of it, and trains are frequently passing within three or four feet of the nest all day. The nest contained three young ones, but there are now two only, the third having been found dead.

Its death was probably caused by getting caught between the connecting rods when the points were being moved.

JOHN R. B. MASEFIELD.

WHITE-TAILED EAGLE IN INVERNESS-SHIRE.

AT 5 p.m. B.S.T. on May 23rd, 1927, from my window at Aviemore, I saw a large bird pass heavily up the valley of the Spey. At first I thought it was a Golden Eagle, but there was a clumsiness in its flight that made me doubtful of it. I hurried out with my glass, and saw that it was a White-tailed Eagle (*Haliaeetus albicilla*). The day was dark and the white tail was conspicuous against the dark hill-side. I should say the bird was in its third or fourth year as the extreme tip of its tail was black. It flew so far above the river, then turned N.W. across the shoulder of Creag Eallachie. A Black-headed Gull was mobbing it for a time.

It was interesting to compare the flight with the Golden Eagle's flight. The White-tailed Eagle was decidedly larger, but what struck me was the heaviness of its flight, and it was this that, when I saw it first, put me in mind of the Heron. As I had a stalking glass with me I was able to have an excellent view. It was fortunate that I happened to look out of the window at the very moment the Eagle was passing, as I have never heard of the Erne being seen in the Spey Valley during recent years.

SETON GORDON.

GRIFFON VULTURES SEEN IN DERBYSHIRE.

ON June 4th, 1927, I saw two Griffon Vultures (*Gyps fulvus*) over Ashbourne at about 6 p.m. When first seen they were only a few hundred yards distant and their unusual size was, of course, a characteristic feature, but later, they soared away to an immense height. They rose at first almost perpendicularly, but when high in the sky they made a N.W. course against a rather strong wind. They were under observation for about a quarter of an hour; at the end of that time one of the birds turned into the eye of the wind and sailed along to the S.E. (towards Derby), whilst the other kept on its N.W. course (towards Buxton and the Peak) and both were lost to view. The white ruff round the neck and the white bare head were clearly seen in the case of one of the birds, and even at a great height were easily detected when they caught the sunlight. The colour of the birds was a dirty brown, and (with the exception of the ruff) there was no white about them.

They were also seen by my partner, Dr. Hollick, and his daughter, Miss Kathleen Hollick. ERNEST A. SADLER.

While watching for the return of homing Pigeons on June 4th, 1927, at Ashbourne, I saw two very large birds, obviously Vultures, circling overhead and not very high. They had light coloured ruffs round the neck and bald heads, and remained for about twenty minutes soaring about. Having had previous experience of Vultures in South Africa, I recognised them by their shape and flight. Roughly, they seemed to be between six and seven feet across the wings.

I went to the house and fetched my daughter, and then went to Dr. Sadler's garden where we watched them together as long as they remained in sight, one going northward and the other to the east at a great height.

HUBERT H. HOLLICK.

WIGEON RINGED IN CUMBERLAND REPORTED FROM NORTH-EAST RUSSIA.

THE authorities of the Soviet National Museum of the region Komi-Ust-Sysolak have written to inform me that they have received a foot of a duck bearing one of our rings numbered 36823. The duck was killed by a local hunter on May 27th, 1926, on the river Ijma, near the village of Kartaielskœ in the district of Ijma-Petchora, north-east Russia, in latitude $64^{\circ}.5$, longitude 57° . This ring was put on a Wigeon (*Anas penelope*) on September 4th, 1920, by Mr. T. L. Johnston at Beckside, Longtown, Cumberland. The bird was hand-reared in 1920 from eggs picked up in the locality, and one wing was cut. Two other Wigeons ringed at the same time (Nos. 36806 and 36816) were shot in September and October, 1921, on Rockcliffe Marsh, near where they were ringed.

This record is of extreme interest, especially when considered in conjunction with the journey performed by another Wigeon ringed in Warwickshire and reported from Uralsk, nearly as far to the east though a long way to the south of this Petchora bird, but it may be noted that this was a month earlier in the year.

The fact that the Solway-Petchora Wigeon was taken at the end of May is an indication that it was breeding or about to breed somewhere in this district, and thus forms a remarkable instance of abmigration as Dr. Landsborough Thomson has termed it.



SKETCH MAP TO SHOW THE JOURNEYS PERFORMED BY TWO RINGED WIGEON.

Ringed.

36823 Becksides, Longtown, Cumberland, as a young hand-reared bird, September 4th, 1920, by Mr. T. L. Johnston.

36917 Middleton, Tamworth, Warwickshire, as a bird of the year, October 6th, 1915, by the late Mr. E. de Hamel.

Reported.

On River Ijma, lat. 64.5, long. 57, May 27th, 1926, by Mr. W. Woulfert.

Near Ural'sk, April 21st, 1918 (see *Brit. Birds*, XIII., p. 127).

H. F. WITHERBY.

RED-NECKED GREBE IN NORFOLK IN JUNE.

ONE day in mid-June, 1927, on the Norfolk Broads, a Grebe emerged from a dive close to the launch I was in, not more than two yards away, and I had no difficulty in identifying it as a Red-necked Grebe (*Podiceps griseigena*). It remained close to our boat and looked anxiously around as though it might have young ones not far away. I called two or three friends' attention to it and the very bright orange-chestnut neck and greyish cheek and the difference between it and the

Great Crested Grebe in size, etc. We all agreed as to its being a Red-necked Grebe. JOHN R. B. MASEFIELD.

AVOCET IN NORTH KENT.

AN Avocet (*Recurvirostra avosetta*) made its appearance on the Isle of Sheppey during the week of July 3rd-10th, 1927. It flew up and down the shore for several days and fed on the mud flats at low tide, but was not observed after July 8th. H. RAIT KERR.

BLACK TERNS IN NORTH KENT.

ON July 7th, 1927, while on the Isle of Sheppey, I saw two pairs of Black Terns (*Chlidonias n. niger*) flying over the marsh and also along the shore. They were in the company of several pairs of Little Terns (*Sterna a. albifrons*). This is the first record I have made of Black Terns on Sheppey. H. RAIT KERR.

LITTLE CRAKE IN CARDIGAN.

IN my *Vertebrate Fauna of North Wales* there are many references to birds in the collection of the late Dr. W. E. E. Kershaw of Aberdovey. In May, 1927, I re-examined the collection to see if there were any species therein which had been overlooked. I noticed a specimen of the Little Crake (*Porzana parva*). On enquiry, I ascertained from Mrs. Kershaw that the bird was picked up on the railway at Ynyslas, on the Cardiganshire shore of the Dovey Estuary, by Mr. Hilton Kershaw. It was quite fresh, and had probably met its death by flying against the telegraph wires. The date, so far as she could remember, was 1894. This is an addition to the Fauna of North Wales. H. E. FORREST.

HOOPOE IN CORNWALL IN JULY.—Mr. H. M. Wallis writes that on July 14th, 1927, a friend saw a bird, which by the description was undoubtedly a Hoopoe (*Upupa epops*), on the lawn of a small house in the town of Falmouth. A very early date if the bird was on autumn passage.

BLACK-NECKED GREBE WITH DEFORMED BILL.—Commenting on Mr. J. Bartholomew's note (*antea*, p. 69) on a Blackbird with a deformed bill, Mr. J. B. Watson describes a Black-necked Grebe (*Podiceps n. nigricollis*), one of a party of fourteen, that he had under observation on the Lake of Geneva in the spring of 1927. This bird's upper mandible was curved directly upwards from the base. It evidently suffered considerable disability in feeding as it assumed its summer plumage later than the others and remained behind after the others had left. At the same time the disability would not be so great in the case of a Grebe as in that of a bird that does not obtain its food in the water; in the latter case such a deformity must necessarily end in starvation.

LETTERS.

ON BREEDING OF CERTAIN DUCKS IN SCOTLAND.

To the Editors of BRITISH BIRDS.

SIRS,—In reply to Mr. Jourdain's Editorial to my letter, I cannot see what fresh evidence I brought in, for I thought that I made it quite clear in my original article (*Scottish Naturalist*) that Mr. Whitaker actually saw the duck on the new nest. In my letter in your last issue, I most certainly did not infer that the deserted clutch was not taken—indeed I distinctly said that it was the one taken and enlarged upon the fact.

Mr. Whitaker's statement (*in litt.*) "never does anything of the kind," refers to the present not to the past, obviously on account of his age. It would be most interesting to learn to what type of egg the ones in dispute belonged to, if they are not those of the Velvet Scoter. I suppose that the names of living collectors cannot be published because they are lawbreakers and might be prosecuted, as they richly deserve to be!

In mentioning the clutch of Scaup said to have been taken in Fife, I was merely seeking further information on the subject, which Mr. Jourdain has now given, and for which I am indebted to him.

LANCASTER.

H. W. ROBINSON.

[In Mr. Robinson's letter (*antea*, p. 69) he gives the additional information that Mr. Whitaker saw the Velvet-Scoter "sitting on her eggs close to the deserted clutch." No details are given as to the eggs, and it is not even stated whether the bird was flushed or merely seen apparently incubating, nor can we infer from Mr. Robinson's account whether this was noted on the same or a subsequent visit. It is, however, quite a different version to the bare statement that the bird bred again later on "hard by." I have not at present access to the sale catalogue of the Crewe collection, owing to a move, but the incident happened a good many years ago when Mr. Whitaker was contributing freely to periodicals and undertaking long journeys in search of eggs, yet not a single word on the subject has ever appeared under his signature on the subject. When dealing with professional collectors, Mr. Robinson opines that it is because they are lawbreakers that their names are suppressed, and that the fear of richly deserved prosecution is the reason for the omission of their names. I would suggest that *British Birds* is not the organ for the advertisement of professional dealers and that amateur collectors who break laws are equally liable to prosecution.—F. C. R. JOURDAIN.]

"HOW BIRDS LIVE."

To the Editors of BRITISH BIRDS.

SIRS,—With your permission I should like to answer one or two of the points raised by Mr. Jourdain in his interesting criticism of my *How Birds Live*. First, as to territory among birds of prey. The statements he quotes are, thus isolated, quite obviously indefensible. I should no more dream of arguing against the existence of communities among Raptores than he would. The challenged phrase directly follows several pages emphasising that only severe pressure can maintain the system of individual territories, and that where stringency of food-supply is relaxed some degree of tolerance or communism will follow in every case. I said: "My standpoint is that nothing but hard pressure of circumstances can bring about and maintain territorial jealousy Yet territory and its alternatives are not aims or systems in themselves, but simply the balance arrived at by various contending forces and instincts Birds of prey, which

perform a function peculiarly liable to abuse, are held in check. . . .” etc. Very significantly, Mr. Jourdain omitted from his quotation the words I have put in italics. That omission explains how we come to be at cross-purposes; while I was considering simply the forms which *function* as birds of prey he took me up as if I had made the absurd statement that none of the order Accipitres are sociable—an entirely different thing. (Incidentally, I wrote in each case “birds of prey,” without capitals; not “the Birds of Prey” as he quotes me.) The overlooked clause involves a very real distinction. Economically Lesser Kestrels, Red-footed Falcons and the like are simply glorified flycatchers; while Vultures and Kites are no more predatory than many Gulls and Crows—these, like the aptly quoted examples of Ospreys breeding sociably in America, do not confute my argument but reinforce it. For the deciding factor in these cases, just as in the converse instance of White Storks breaking up their old breeding colonies in Germany and nesting singly, is simply food-supply, and, as I have been arguing all along, inordinate restriction of food-supply in the breeding season is linked with territorial jealousy and plenty with tolerance or actual communism.

Again, Mr. Jourdain has evidently misunderstood me over the increase of Peregrines. Obviously enough, after long artificial repression some such adjustment will be needed; what I hold is not that they cannot increase, but that they cannot increase beyond a definite economic ratio to their potential victims. I said that the numbers had remained stable “until their enemies became so much better armed that the contest could no longer be sustained”; they are now demonstrably much below par. Vast sea-bird colonies might well give scope even for several pairs of Peregrines to live without ill effects. As I stated on p. 34, the number of Hawks is stabilized through territory; but I never said it was stabilized at the absurdly low ratio to which two centuries of malignant persecution have artificially reduced it in Britain. When such uneconomic interference is brought to an end they will regain their natural status, which, as Mr. Jourdain shows, is considerably more important than their present one. It is necessary for this to be made clear; to maintain that Hawks have an *unlimited* scope for increase would be to deny the perfectly obvious elementary truth that control of bird population in relation to food-supply is exercised through the check of territory invoked by a shortage.

For the rest, I should never dream of saying that “the Guillemot lives as long as the average of human life”; I did say that “Many of the larger birds, and the Guillemot may well be one of them, *are quite capable* of living as long as the average man or longer”, but for their very much heavier risks, because they have in practice been known to do so under favourable conditions. I credited a pair of Blackbirds with “on an average at least nine eggs” in a season—not the dogmatic ‘9’ quoted, and far from losing sight of the fact that half its life is spent in winter I expressly said: “With us the chief agencies in keeping the numbers down are almost undoubtedly migration or *the alternative* of enduring hard weather.” The one well-founded charge is the last one; I am grateful for Mr. Jourdain’s suggestion on the possibility of vocal signals inaudible to an observer, and confess I had overlooked the factor. I am well aware that the generalizations involved in a sketch of bird-life restricted to some twenty thousand words are subject to exceptions, and past ornithologists have been prone to dwell on these striking cases to the disproportionate neglect of the normal. To me the fact that birds which live by killing other birds are with few exceptions exclusive in their territorial habits seems more

significant than the fact that Eleonora's Falcon manages to combine sociability and hunting. To rate the one aberrant specimen, the one freak egg, the one abnormal habit so high is a part of the collector's habit of mind which has long held ornithology back, and kept some of the most obvious and essential truths about bird life from being recognized until this century.

I admit I find it strange to be rebuked for statements I never made with the aid of arguments along much the same lines as my own. Mr. Jourdain can have no true quarrel with what I have maintained, for my view of the facts is much the same as his. His quarrel must be against my manner of expression, and if a further edition should be called for I shall try to remove all chance of misunderstanding, the blame for which rests partly on myself. E. M. NICHOLSON.

[After carefully re-reading Mr. Nicholson's argument as to territory among birds of prey, I cannot but think that my inferences as to his meaning were fully justified. The distinction between "Birds of Prey" and "birds of prey" is one which cuts both ways. Taken in the sense in which Mr. Nicholson restricts it in his letter, "birds of prey" must include such species as the larger predaceous Gulls, *Larus marinus*, *L. hyperboreus*, etc. Yet great colonies of both species may be found, with nests only a yard or so apart, so that the statements are just as fallacious as when restricted to the Accipitres! The phrase "which perform a function peculiarly liable to abuse," is vague and might equally be taken to refer to *all* birds of prey. But even if we exclude the Lesser Kestrels and Red-footed Falcons as being mere "glorified Flycatchers," there still remain so many species which can and do breed sociably and yet are, in the fullest sense, predaceous, that Mr. Nicholson's generalizations lose all their force. The deciding factor, as he now admits, is the food supply, and not the "fierce, unreasoning jealousy, so strong that even in the dead season they are rarely capable of forming the smallest and simplest society," as given in his book.

Similarly, with regard to the Peregrine, if Mr. Nicholson had written as he now does there would have been less scope for criticism. There is little to show in *How Birds Live* that he regards the present population as much below par. On the other hand he is at pains to point out that even in the Middle Ages savage protection laws were unable to produce an increase in the number of resident pairs. Probably the numbers in the west of England are now higher than in the Middle Ages, as the food supply has increased, and, so far from being stabilized through territory, the only limits are the extent of food available, and in some districts the number of available nesting sites. It is strange that the only reference to the "two centuries of malignant persecution" which have been far the most important factor in the distribution of our Raptores, is the one, somewhat cryptic, sentence which Mr. Nicholson quotes from p. 34. With regard to the Guillemot's term of life, can Mr. Nicholson produce any evidence of the existence of one bird for a period over twenty years?

In the later paragraphs of his letter Mr. Nicholson reverts to his earlier views, and asserts that birds which live by killing other birds are, with few exceptions, exclusive in their territorial habits. (Why should the bird killers only be mentioned to the exclusion of those which prey on mammals, reptiles, fish, etc.?) This is to him more significant than the fact that the Eleonora Falcon combines sociability and hunting.

The real fact is that of the British-breeding Accipitres alone, the Merlin, Kestrel, Golden Eagle, Common Buzzard, Montagu's Harrier,

White-tailed Eagle and Osprey have all been shown to breed more or less sociably under favourable conditions, while there is some evidence as to three or four additional species. The only species which breeds with us regularly as to which evidence of sociability is apparently lacking is the Sparrow-Hawk. This is no case of undue stress being laid by the critic on the abnormal habit of one species, as Mr. Nicholson suggests by his reference to the Eleonora Falcon. To compare such criticism to the overrating of the importance of an abnormal egg or an aberrant bird is quite futile, for it is his own law, enunciated as general, which is based on a misapprehension of the real factors which govern the increase of predaceous birds, and he has founded it on the exception rather than the rule, mistaking segregation though artificial diminution in numbers for the effect of territorial jealousy.—F. C. R. JOURDAIN.]

"HOW BIRDS LIVE."

To the Editors of BRITISH BIRDS.

SIRS,—I am particularly interested in Mr. Jourdain's remarks in his review of *How Birds Live*, and agree with him in his criticism of Mr. Nicholson's statement that "In England, at any rate, sociability makes no further headway among the birds of prey." In the hills bordering industrial Lancashire, many moorlands that were formerly well preserved, have, during recent years, been neglected; and the Merlin (*Falco c. æsalon*), which in the old days was only known as an uncommon nesting species, has become quite common. I have, during the present season (1927), seen six nests with eggs in a three miles walk, and it is quite usual to have three or four adult Merlins flying around us when we are near a nest.

In 1925, two nests were about 350 yards apart, and within $\frac{3}{4}$ mile were another two nests about $\frac{1}{4}$ mile apart; three of these held young ones.

During the present year, Mr. Frank Whatmough of Rochdale and I have seen twenty nests of Merlin in a quadrant of about eleven miles by two miles, behind a thickly populated industrial area; and several other nests have been found by a keeper; I believe that some of the nests seen (probably six) were second nests, but there were certainly at least twenty pairs of Merlins within these limits. Adjoining areas have also proved prolific: six nests have been found by a friend in a small area to the west, and we have known of many others to the east and south-east.

From the above facts my contention is that if our birds of prey were allowed to live and breed without interference by man, they would reach that state of sociability which is described by Mr. Jourdain as occurring in several Continental and N. American species.

FRED TAYLOR.

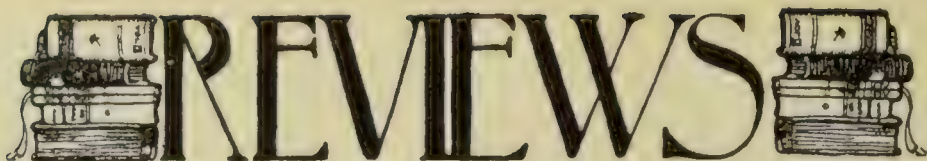
SIZE OF CLUTCHES OF EGGS OF THE ROBIN.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. J. H. Owen in his note on the clutch of the Robin (*antea*, pp. 64-65) states that "as many as seven is not really rare." Out of fifty-nine nests examined in the past six years only one held a clutch of seven eggs; ten nests had six eggs each, thirteen nests had four each, the rest five. Do other readers find a larger proportion of seven-egg clutches than the above?

R. H. BROWN.

[This is, of course, only a question as to what "really rare" means. Clutches of 5 of Buzzard are "really rare" because only two British cases are known. If everyone found a clutch of 7 in every 60 nests of Robins examined there would be some hundreds known. I think 1 in 60 quite as large a proportion as occurs anywhere.—F.C.R.J.]



REVIEWS

Days with the Golden Eagle. By Seton Gordon. 4to. Williams & Norgate, London. 12s. 6d.

MR. SETON GORDON, with the help of his wife, whose share in the first-hand observations must not be forgotten, has produced a monograph that cannot fail to interest the ordinary reader, apart from the ornithologist. The Eagle, as the King of Birds, has been made familiar to every one of us by fable, tradition and story from one's nursery days. A book that deals with its real life and environment, its relations with men and with other species of mammals and birds, by an author who was born and bred in an Eagle country and to whom Eagles are an every-day sight, is most welcome. Mr. Gordon devotes quite a number of chapters to word pictures of the Eagle's country, which are put before the reader with vividness and wealth of description and it is evident that the author loves every hill and corrie of it. The descriptions are indeed so vivid that one is able to live in the country one's self while reading them; at the same time one cannot help feeling that there is a sameness about one or two of the chapters that would prove boring to some readers.

The author was indeed fortunate in finding a tree-built eyrie that could be overlooked from a steep hillside, so that watching and photography could be conducted at close quarters with facility and comparative (!) comfort. The chapters containing the narrative of the Eagle's home life thus acquired are full of valuable facts and observations and merit the attention of every bird-lover. Those on the Eagle's food are equally valuable and interesting and of this the author has compiled an authentic list that runs to no less than thirty-two items. On the preservation of Eagles or otherwise, Mr. Gordon is on sound lines and puts down the evidence for and against in a quite impartial manner, both from his own and other first-hand observations. The conclusions seem to be that so long as hares and rabbits are plentiful, but little harm is done by Eagles to Grouse, though occasionally a single individual may become a "rogue" in this respect, just as a single Kestrel may with young Pheasants. What game-preservers chiefly complain about is of Grouse being driven off their ground by Eagles in the shooting season, and those, and there seem to be many such, are to be commended who tolerate and even welcome the presence of Eagles on their ground. With regard to sheep the consensus of opinion seems to be that the Golden Eagle practically never touches a lamb *that is alive*.

We welcome the author's statement that, taking the Highlands of Scotland all over, it is probable that the Golden Eagle is holding its own.

Mr. Gordon's photographs are excellent, though one or two have suffered somewhat from over-enlargement. Mr. Harrison's pencil sketches as chapter headings are charming, while his coloured plates form an attractive feature of the book, the one of an Eagle striking Grey Lag being a really fine picture.—N.F.T.

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EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND

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FIELD-NOTES FROM LAKELAND, 1926.

BY

R. H. BROWN.

RAVEN (*Corvus c. corax*).—Four nests were found, three were placed in the upper portions of the cliffs, the fourth in the lower part, but each nest was similarly situated, being overhung by a large rock and built on a rock that sloped steeply downwards.

A Raven, presumably a female, when flushed from a nest of five eggs on March 19th, flew restlessly around, calling "pruk, pruk," and several times planed upside down, uttering as she did so a "wark, wark." The nest was later found robbed, and if the bird laid again it was in another cliff. A similar fate befell a clutch of two eggs found on April 2nd.

The nest of the third pair was near the eyrie of a pair of Peregrine Falcons, and on April 11th, when both Ravens, with much calling, were flying around above their nesting-crag, the Falcons suddenly appeared and each selecting a Raven repeatedly stooped headlong at it, but their onrushes were easily avoided by the Ravens which sometimes retaliated.

A flock of sixteen birds was noticed near some crags at dusk on March 9th. Some appeared to be paired; one bird was repeatedly planing.

On June 23rd, a pair was noticed planing upside down, each turning from left to right, whilst uttering a "Kōrlück, Kōrlück." A party of five was seen near some crags late in the afternoon of November 30th, and one frequently planed upside down.

CARRION-CROW (*C. c. corone*).—A pair, for both assisted, began building on March 17th. Progress for the first four days was slow, then quickened; by the 27th the nest was ready for lining which occupied another five days. The birds obtained the twigs for the beginning of the nest from live branches, either by breaking them off with their bill or else by walking as far out along the branches as they would bear them, when jumping into the air they dropped heavily on to the branches and thus snapped off the end twigs.

The nest held one egg on April 6th, on the 9th there were four. Incubation, performed solely by the female, began with the first egg; two eggs hatched on April 26th, two the next day, giving an incubation-period of eighteen to twenty days. Only three young were reared, which left the nest on May 28th; fledging-period thirty-one to thirty-two days.

During the first ten days of incubation the female left the nest to be fed by the male and indulged in short flights on these occasions, but during the last days before the young hatched she was fed at the nest and was not seen to take any exercise. The young were brooded during the day until five to six days old and at night until nine to ten days old.

ROOK (*C. f. frugilegus*).—The same two rookeries as in 1925 were visited and one hundred and twenty-seven nestlings ringed, distributed amongst fifty-three nests, which gives an average of 2.4 young per nest (2.2 young per nest in 1925). There were not so many dead youngsters under the trees this year, which seems borne out by the slightly higher percentage of young reared as compared with last year. The average age of the nestlings was three weeks.

5 nests each held 4 young.

20 " " " 3 "

19 " " " 2 "

9 " " " 1 "

53 nests held 127 young.

YELLOW BUNTING (*Emberiza c. citrinella*).—In Vol. XIX., p. 60, and Vol. XX., p. 122, I recorded nests with one egg on April 24th; in 1926, one with two eggs was found on April 17th, another with one egg on the 19th, whilst on the 27th nests with four, three, and two eggs were found.

YELLOW WAGTAIL (*Motacilla flava rayi*).—In one area in Cumberland a male was noticed on May 2nd, the pair was about on the 9th, and copulation noticed, whilst the female was sitting on six eggs on the 19th, and on June 14th the young were ready to leave the nest.

A female was observed carrying feathers to a nest on May 19th, the nest being placed in the side of a tuft of juncus grass and made entirely of moss with a lining of feathers. There were six eggs on May 29th, but when next visited on June 17th it held only one nestling, whilst the nest was almost waterlogged owing to the heavy rains the previous few days and evidently the other youngsters had perished from exposure to the wet. This day two more pairs were seen feeding fledged young out of the nest.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—In the locality where the observations were made last year (*vide* Vol. XX., p. 122) a watch was kept from the middle of April onwards but no bird was seen until May 17th, when a single male was found singing from the top of an oak tree. Despite

further visits he was not seen again and no others appeared. The nest-holes used by the two pairs last year were occupied by Starlings.

Two males were noticed in another area, each obtained possession of a tree with a suitable knot-hole and sang vigorously for about a month, but no females came and the birds disappeared.

WHEATEAR (*Enanthe æ. ænanthe*).—In two localities it was noticed that the adults had disappeared by the middle of July, whilst the young did not begin migrating before August. The adults may just have retired to undergo their moult, but in places where they do not breed but pass through on migration it has been noticed that they usually appear first, followed later by the young. In September, however, both adults and young have been seen migrating together; possibly some belonged to the Greenland race.

WHINCHAT (*Saxicola r. rubetra*).—A brood of seven fledged young was found on June 17th, attention being first drawn towards a probable nest through the excited alarm-notes of the male which was perched on a straggling hawthorn-hedge, bordering a road and opposite the site where the nest was eventually found. The young were ringed and in all probability would have left the nest the following day; no other Whinchats were seen in the vicinity. On July 25th, I happened to pass along this road and as soon as the straggling hawthorn hedge came into view the alarm-notes of a Whinchat were heard, and presently a pair was found perched on this hedge. The bushes were searched and three young Whinchats were flushed from them; they bore no rings and, from the down on their heads and their inability to make long flights, were evidently not long out of a nest. The evidence, although not quite conclusive, points to this pair of Whinchats having reared two broods.

REDSTART (*Phœnicurus ph. phœnicurus*).—A pair was seen about a hole in an elm tree on April 29th, but it was thought the birds had just arrived and no more notice was taken of them. When, however, the hole was examined on May 23rd, the female was found brooding seven young at least three days old; allowing fourteen days for incubation, then the clutch was laid by May 6th, and the first egg was laid on April 30th.

A nest of six young, two days old, was found in a stone wall on May 26th and, allowing fourteen days for incubation, the first egg was probably laid on May 5th.

On May 31st a female was caught on a brood of seven young, the nest being well hidden behind an ivy stem that

climbed the tree; the young would be at least six days old (they left the nest on June 7th), giving May 5th as the date for the first egg.

If any of these pairs bred again, they used other nesting-sites. Altogether, nine nests were found, four with seven young each, the rest all had six young.

ROBIN (*Erithacus rubecula melophilus*).—On March 16th a Robin, apparently a male, was seen to feed a female three times in succession. Afterwards, the female retired into hiding amongst some bushes whilst the male sang from the top of an ash tree. On two occasions in April a male was noticed feeding a female, but she never sought hiding after being fed.

Copulation was observed between a pair on April 30th. The female was perched on a branch of a holly tree, the male on the ground; she enticed him up by fluttering her wings and assuming a coition-attitude; three times they mated, when the male disappeared amongst some bushes near by, whilst the female remained on the branch and began preening herself.

The average duration of the spring song here is from the third week of January until the second week of June; the autumn song continues from the second week of August until the third week of October. Most males cease singing when the females begin incubating, but renew their songs when the young are about to leave the nests; unmated males continue intermittently until the breeding-season ends. Most song is heard at early morning, noon and dusk. The Robins of the neighbourhood had finished singing this autumn by October 27th; hard weather then set in and continued until November 7th, to be followed by about three weeks of mild open weather during which the Robins sang daily, ceasing about November 27th.

WREN (*Troglodytes t. troglodytes*).—On November 1st a male was singing to a female, his wings and tail held partly open and drooping or occasionally one wing was held horizontally. Three birds were noticed on November 27th, apparently two males and a female; one male and the female kept together and seemed to be paired. The paired male sang vigorously to the female, often with one wing held horizontally, and on these occasions the other male, although sometimes as far as fifty yards away, would also burst into song and hold one wing horizontally.

TAWNY OWL (*Strix aluco sylvatica*).—A pair nested in a hollow tree for the second consecutive year. Two eggs were laid but one was infertile. One afternoon, whilst the female

was sitting, the male was noticed to visit the nest with a short-tailed field-vole. The nestling hatched on April 30th; on May 4th the nest held a short-tailed field-vole and on the 6th two short-tailed field-voles, a common shrew, and a Song-Thrush. Both adults approached closely to the nest-tree and hooted whilst I was there, and five days later when the nest was visited it was empty.

On April 28th a female was found brooding three nestlings, the youngest just hatched, in an old nest of a Crow, which also held the perfect bodies of one short-tailed field-vole, three common shrews and a water-shrew. On May 4th the food consisted of two short-tailed field-voles, and on the 9th of four short-tailed field-voles, a common shrew, a mole and a frog, but the two eldest nestlings were gone and the youngest was partly eaten. The voles had evidently just been killed as they were still warm. A week later these mammals and the partly-eaten nestling had disappeared.

PEREGRINE FALCON (*Falco p. peregrinus*).—The prey found at each visit to these eyries was removed so as to avoid the possibility of the same bird being counted twice. All the Blackbirds found were males. Apart from the spring, when the large number of birds killed has possibly some connection with the courtship, I discovered no evidence that these birds killed in excess of their requirements. Pigeons were only classified as Homing-Pigeons when the N.U.R.P. ring was found. Of the total prey found, Song-Thrush represented 15.4 per cent.; Starling 12.2 per cent.; Wood-Pigeon 11.5 per cent.; Pigeon 10.3 per cent.; Blackbird 9.0 per cent. and Red Grouse 9.0 per cent.

Eyrie No. 1.—March 19th: 1 Redwing, 1 Wood-Pigeon. April 10th: Female flushed from clutch of four eggs; flew away without any outcry, returned in about five minutes, called once, then again disappeared. 1 Magpie, 1 Greenfinch, 2 Song-Thrushes, 1 Wood-Pigeon, 1 Homing-Pigeon. May 9th: No bird on the eggs, but female noticed at end of cliff. 2 Song-Thrushes. May 13th: Eggs addled, *i.e.*, embryos had developed and then died. Under the nesting-ledge were three empty cartridge-cases that were not there on April 10th when the ground was searched for pellets. June 2nd: 2 Song-Thrushes, 1 rabbit. July 31st: 3 Song-Thrushes, 1 Sandpiper, 1 Teal. August 24th: 1 Starling, 1 Song-Thrush. September 21st: 1 Meadow-Pipit, 2 Starlings, 1 Mallard. October 21st: 2 Starlings, 1 Redwing. November 30th: 1 Blackbird, 1 Wood-Pigeon. December 22nd: 1 Redwing, 2 Blackbirds.

Eyrie No. 2.—May 11th: 1 Starling, 1 Song-Thrush, 1 Blackbird, 1 Redshank, 1 Wood-Pigeon. July 29th: 1 Starling, 2 Meadow-Pipits, 2 Pigeons. August 29th: 2 Starlings, 1 Lapwing, 1 Red Grouse and 6 dung beetles. September 27th: 1 Rook, 2 Starlings, 1 Kestrel. October 30th: 1 Redwing, 1 Blackbird. November 20th: 1 Starling, 1 Redwing, 1 Wood-Pigeon. December 11th: 1 Rook, 1 Song-Thrush, 1 Wood-Pigeon, 1 Red Grouse.

Eyrie No. 3.—March 13th: 2 Meadow-Pipits, 1 Song-Thrush. April 5th: Female brooding one egg, called a little, then she and the male flew away. 3 Starlings, 4 Greenfinches, 3 Skylarks, 1 Fieldfare, 1 Song-Thrush, 2 Blackbirds, 1 Curlew, 1 Homing-Pigeon. April 24th: Eyrie robbed but female found brooding on another scrape on a ledge about twenty yards from the robbed one. Both Falcons calling. 3 Skylarks, 1 Fieldfare, 2 Song-Thrushes, 4 Blackbirds, 1 Curlew, 1 Red Grouse. May 7th: Visited the ledge where female was found brooding on April 24th and disturbed her from a clutch of three eggs. Bird brooding lengthwise on the eggs, her face towards the cliff. Called a little, then disappeared. 1 Meadow-Pipit, 2 Wood-Pigeons, 1 Golden Plover, 2 Red Grouse. May 26th: Female on the eggs. Male was on guard near the eyrie, and was much noisier than the female and several times swooped at me. 1 Song-Thrush, 2 Wood-Pigeons, 1 Red Grouse. June 4th: Flushed male from the eggs which were unchipped. Female was flying about when eyrie was visited but only called once; male very demonstrative. Some down about the nesting-ledge. 1 Song-Thrush, 1 Wood-Pigeon. June 9th: Eyrie robbed. If the eggs were fertile then the incubation-period was over twenty-eight days. 1 Wood-Pigeon, 1 Red Grouse. July 22nd: 1 Red Grouse, 2 Pigeons. August 17th: 1 Rook, 1 Greenfinch, 1 Wood-Pigeon, 1 rabbit. September 24th: 1 Song-Thrush, 1 Homing-Pigeon. October 15th: 1 Starling, 1 Blackbird. November 26th: 1 Fieldfare, 1 Red Grouse. December 23rd: No Falcons seen; no remains of any prey.

Eyrie No. 4.—August 7th: 1 Red Grouse, 3 Pigeons. September 13th: 1 Song-Thrush, 2 Pigeons. October 12th: 1 Red Grouse, 1 Pigeon. November 19th: 1 Pigeon. December 30th: A Falcon about but no prey found.

Eyrie No. 5.—April 11th: 2 Meadow-Pipits, 1 Redwing, 1 Wood-Pigeon, 1 Red Grouse. April 29th: Male on guard; he called and female flew from ledge that held nest of two eggs. Female noisier than the male. Her notes described as a very rapid, high pitched, "quërk." 1 Wood-Pigeon.

May 30th : Eyrie robbed. 2 Wood-Pigeons, 1 Homing Pigeon. July 27th : 3 Starlings, 1 Meadow-Pipit, 2 Song-Thrushes, 1 Pigeon. August 28th : 1 Song-Thrush, 1 Red-shank, 1 Wood-Pigeon, 1 Red Grouse. September 25th : 2 Pigeons. October 28th : 1 Song-Thrush, 1 Red Grouse. November 27th : 1 Greenfinch, 2 Blackbirds, 1 Fieldfare. December 18th : No Falcons seen ; no prey found.

Eyrie No. 6.—May 10th : 1 Homing-Pigeon, 1 Pigeon. September 10th : 1 Pigeon.

MERLIN (*F. columbarius æsalon*).—A pair nested in the same locality as last year (eyrie A.). The birds were first noticed on March 14th. On May 23rd and again on the 30th the male was found brooding five eggs whilst the female was on guard on a boulder ; both birds disappeared without any outcry. On June 19th the female was brooding four young (fifth egg infertile) about ten days old ; she flew around without calling, but presently the male appeared and both began uttering their alarm-notes ; on the other occasions when the nest was visited the female was always noisy, but at the last visit she was not on guard and was presumably away hunting. The young were in down except the quills of the flight-feathers which were sprouting, whilst eight days later their flight- and tail-feathers were half out and their breasts were beginning to feather. On July 3rd, their tail- and flight-feathers were developed, their breasts and mantles feathered, and the heads and thighs beginning to feather. Although twenty-four days old it would be another three or four days before they were ready to leave the nest. On various feeding-places were the remains of 1 Wheatear, 2 Song-Thrushes. July 26th : 2 Greenfinches, 1 Meadow-Pipit, 1 Wheatear. August 25th : 1 rabbit.

Another pair nested within one mile ; they were not present last year and were late in arriving, whilst as only three eggs were laid it is possible the female was a one-year-old bird and one of the nestlings reared at eyrie A. in 1925. The birds did not arrive until the last week of April and on June 12th the female was disturbed from three eggs and flew around without any outcry ; on the 19th they were well chipped and the female “kekkek” vigorously, as she did at the other visits. Six days later she was brooding the three young ; the nest held the remains of a Song-Thrush and two adult female flight-feathers. On July 3rd the young were beginning to feather up the sides of their breasts and the feathers were bursting from the quills of the wings and tails. Another adult female flight-feather at the nest.

The adults were playing about with each other on the 14th ; the youngsters were feathered except for some down on their heads and thighs ; beside the nest were the remains of a Greenfinch and Meadow-Pipit.

In a locality outside the Lake District a brood of two young was found, and beside the nest was the decomposed body of a third youngster. The nest was littered with pellets and the fledged young were some distance from it (at the other nests the young moved outside them as soon as they became fouled), but never replied to the calls of the adults. On various feeding places were the remains of 1 Greenfinch, 2 Song-Thrushes, 1 young Redshank. September 16th : 1 Greenfinch, 1 Song-Thrush, 1 Lapwing.

KESTREL (*Falco t. tinnunculus*).—A female was flushed from a clutch of six eggs on May 18th, and on June 22nd the four young were feathered and two flew away, so that the fledging-period was under five weeks. The female was very excitable and several times swooped within inches of my head. The nest held the remains of a Song-Thrush and Blackbird.

A nest of four young, visited on June 26th, held two short-tailed field-voles and a common shrew.

COMMON BUZZARD (*Buteo b. buteo*).—Ten nests were found of which eight were robbed, and near one robbed nest were two empty cartridge-cases.

In two localities where a young bird was reared last year, two pairs were breeding this year, and in both cases the two nests were within one hundred yards of each other. This suggests that the Buzzard breeds when one year old and in the area where reared (when possible).

A visit was paid in the first week of April to the site where four young were reared last year and the old nest was found repaired, whilst about twenty yards away a new nest had been built and was ready for eggs. When next visited it had been robbed, so that it is not known whether this pair again laid four eggs.

A pair began rebuilding two old nests early in February, and on the 8th considerable progress had been made, whilst from the down about one nest it seemed a Buzzard was roosting in it at night. On the 28th the outer structures of both nests were finished ; by March 10th the egg-cups were partly lined with bracken, and on April 11th a female (a larger and quieter bird) was flushed from one egg in the second nest. Four Buzzards were noticed soaring around, and on further investigation a third, and newly-built, nest

was found; on April 20th both nests, which were about seventy-five yards apart, held two eggs.

A nest of two eggs was found on May 22nd, a quantity of down about the egg-cup and nest-rim. The female was brooding two young, three to four days old, on June 2nd, whilst on the nest lay three water-rats (two perfect) and a headless and well-plucked Meadow-Pipit. The down was gone from the nest (it is usually removed a day or two before the young hatch). On June 6th, there was a considerable difference in size between the two nestlings, probably not due solely to age, and possibly the larger nestling was a female. She began crawling about the nest and meeting the other seized it vigorously by the nape of the neck and shook it fiercely for over a minute, like a terrier shaking a rat, the younger bird mewling all the time. As suddenly as she had seized her nest companion she released it and continued her crawling. On the nest-rim, which was decorated with mountain-ash foliage, lay a headless adult rabbit. Seven days later only the elder nestling remained, there were no signs of the other. On July 4th, this youngster was fledged except for a little down on the head; the nest was not decorated and held the remains of a Wood-Pigeon.

A nest of two eggs, visited on June 6th, was decorated with mountain-ash foliage and on a nearby feeding-place were the remains of a rabbit. Unfortunately at the next visit it was found deserted; a partly-eaten rabbit was noticed on the feeding-place.

COMMON HERON (*Ardea c. cinerea*).—At the colony which has been visited for the past two years, the nests, built in Scots firs, are constructed of the branches and twigs of the beech and silver birch. Some nests are no larger than Crows'. Incubation begins with the first egg laid and rarely are all the young reared. At times an adult is careless and steps, with fatal results, on a new-born nestling; some young die, from an unknown cause, when about half-grown; whilst a few have been found severely pecked about their heads, napes and backs. The young are brooded intermittently until fledged. Food is either delivered out of the adult's pouch on to the nest, then broken up and served amongst the youngsters, or disgorged out of the adult's pouch into the nestling's bill, and it seems the adults bring them stones to aid digestion. The following fish were found either in the nests or were thrown-up by the youngsters, whilst in both years large pellets, some the size of a man's fist, consisting of the remains of water-rats have been found at the

bases of the nest-trees. May 9th, 1925: 1 chub, 2 eels. May 8th, 1926: 1 trout, 1 eel. May 29th: 2 eels, one about eighteen inches long.

Of the birds ringed at this heronry, four have so far been reported. One was recovered seven weeks after ringing near Ferryhill, co. Durham, about 60 miles E.S.E. of where ringed; a second recovered about eight weeks after ringing near Aspatria, 18 miles S.W. of where ringed; a third about ten weeks later near Kingussie, Inverness-shire, 150 miles N.N.W. of where ringed; and the fourth twelve weeks later on the Solway Firth, 10 miles W. of where ringed. The most interesting record is the one showing northward movement, but the four cases suggest that young Herons move away from the heronry as soon as they are able to fend for themselves.

GOOSANDER (*Mergus m. merganser*).—Three brown-headed birds were on Ullswater on February 4th, and a party of eleven on December 22nd.

CURLEW-SANDPIPER (*Calidris testacea*).—Five young birds with a mixed flock of Dunlins and Ringed Plovers on the Solway Firth on October 6th and later in the day two others were seen.

COMMON SNIPE (*Capella g. gallinago*).—A Snipe was noticed on April 3rd, in the intervals of drumming, to turn a half-somersault sideways, with both wings held almost vertical, and plane upside down for a few seconds, when it resumed a normal position. This performance was repeated four times.

COMMON TERN (*Sterna h. hirundo*).—Food found at the nests of young has consisted of young herrings and young flatfish.

COMMON GULL (*Larus c. canus*).—About mid-August, occasionally by the first week, the flocks of Common Gulls begin to frequent the pasture fields. Some, no doubt, stay the winter; others are present for several weeks then migrate further south. About mid-March the numbers of those that have wintered are increased by arrivals from the south, but by the end of April most have departed north, although a party of eleven adults was noticed on June 11th. It is rarely any young birds are seen with these flocks; presumably the young flock by themselves.

In *British Birds*, Vol. VII., pp. 278–280, Miss M. D. Haviland has an article on the courtship of this species and comments on the bird's habit of calling vociferously for some time from a prominent perch. Several individuals of these flocks have

frequently been seen doing this on warm sunny days in the autumn and early winter, and also the procedure when the bird stretched its head and neck out stiffly and called. In early April, small parties of three to six birds are often formed, the birds calling loudly with heads and necks stiffly inclined ; at times two would walk side by side, or one would shuffle about, its head and body in a straight line and close to the ground, whilst the wings were slightly drooped.

LESSER BLACK-BACKED GULL (*L. fuscus affinis*).—A pair nested on one of the salt marshes in 1925 and hatched three nestlings, but this year fifteen to seventeen pairs bred, and in several cases reared young.

The food is very varied. In the spring these Gulls take a quantity of corn, usually oats, sometimes barley ; whilst throughout the season they feed largely on mussels, pink bivalves and crabs, and to a lesser extent on small shells, shrimps and earthworms. Carrion is eaten at all times and similarly fish, including mackerel, cod, flatfish, flounder, eel, gurnard and father-lasher. Eggs of the domestic fowl and Oystercatcher have also been found at their nests of young, whilst as regards eccentricities a golf-ball, two dummy-teats, and a boot have been noticed.

LAND-RAIL (*Crex crex*).—A nest of nine eggs was found in the centre of a pasture-field that had been allowed to grow in order to cut a crop of hay, and on June 30th, when cutting was proceeding, the machine-knife began working badly, and on examination the nine eggs were found unbroken on the knife-bar. The nest-hollow could not be found, but one was made and the eggs placed in it, but later in the day it was found that Crows or Rooks had raided the nest.

BLACK GROUSE (*Lyrurus tetrix britannicus*).—Two males were displaying to each other on May 2nd, making great use of their white under tail-coverts, and on the 19th a party of nine was noticed, of which several were displaying, although again no females were seen.

SOME BREEDING HABITS OF THE TWITE.

BY

JOHN ARMITAGE.

THE Twite (*Carduelis f. flavirostris*) is usually found nesting in small colonies on moorland slopes, bracken beds, rough boggy pasture, and old stone-quarries. My experience with the species in Lancashire and Yorkshire from 1910 to 1924 enabled me to determine that the nesting "belt" is roughly situated between the elevations of 900 ft. and 1,200 ft. above sea-level, but, during the past three years, I have found the Twite breeding at an elevation of 1,500 ft. in the Derbyshire Peak district.

Wandering parties may be seen in all three counties during winter, but the lowlands are deserted for the upland breeding grounds early in May. Nest building generally commences about the second week in May, but an exceptionally early record turned up during 1927: a nest containing young at least two days old being found on May 8th by Mr. Fred Taylor at Saddleworth, Yorks. When building operations are in progress, cock and hen may be readily observed at close quarters as they flit about collecting building materials and uttering Linnet-like notes. The characteristic "twaate" is often heard and cannot be confused with the cry of any other moorland bird.

The bird, when compared with the Linnet, has a longer tail and seems slimmer; its yellow bill is always conspicuous, sometimes standing out as a bright speck when the sitting bird and its nest harmonize with a rocky ledge or other objects near the nesting site. The rosy flush on the rump of the cock is hardly evident except when seen at very close range, and the entire plumage is often soiled through contact with dirty herbage and burnt patches.

Nests may be found in a variety of situations, but most are built either in ling or dead bracken—resting on the ground or a few inches high among the plant stems. Although the nests among ling are in good cover, they are nearly always open to the sky and may be seen into from above. Other favourite positions are in bilberry clumps, coarse sedge tussocks, and on banks under or against stones. Perhaps the most interesting sites are to be seen in disused stone-quarries. I have found a nest in a quarry-face, hidden from view and the stony approach so small as to admit only three fingers; a nest placed out of sight under a large boulder, another wedged among a pile of loose stones, and several



HEN TWITE AT NEST.
(*Photographed by John Armitage.*)

on high stone-ledges among tufts of matgrass and earthy clumps.

The eggs number from four to seven ; six is the usual complement, and on one occasion (West Riding of Yorkshire, 1915) I found eight in one nest. They are somewhat similar to eggs of the Linnet, but as a rule they are smaller, more pointed, of a deeper blue, and the spots are apt to be more streaky. Rarely, pure white and unspotted eggs are found and on two occasions I have known of Cuckoos' eggs being found in Twites' nests.

It is a small, neat and well-felted nest, looking dark in appearance with a lighter margin of stiff projecting lengths of dead matgrass. The lining is of moss, wool, horse- and cow-hair, vegetable down from coltsfoot leaves, and one or two feathers of Red Grouse or domestic fowl. Incubation lasts from thirteen to fourteen days, and the hen sits very closely, flitting about and twittering softly when disturbed. Sometimes her mate will betray the nesting site by calling or performing nervous movements close to the nest, and while most nests are easy to find, some are exceedingly difficult. This is often due to the nesting birds flying down to the lowlands to a thistle bed or weed-ridden land ; nests containing eggs or large young may be left for as long as twenty minutes. A puzzling habit noted throughout the nesting season is the frequenting of a highway ; the birds twittering contentedly on fencings and walls, and ignoring passing traffic. When photographing a nesting Twite in July, 1926, an amusing incident occurred. The hen was very suspicious of my hiding tent, but the urge of her hatching young quickly brought her to the nest. In spite of this, she flew away but was speedily hustled back by her mate and another cock which readily obliged on four occasions. As each youngster broke clear of the egg, the hen promptly ate up the shells.

For the first few days, the nestlings are clothed in whitish down and are very similar to young Linnets when fledged. Two broods are invariably reared and second nests usually contain young about the end of June or early in July.

NOTES

"BRITISH BIRDS" MARKING SCHEME.

"RINGERS" are requested to send in to the Editor, not later than October 31st, their schedules, together with a list showing the number of each species ringed.

THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

THE following incubation- and fledging-periods were obtained (A) near Chichester, Sussex; (B) near Marlborough, Wilts; the incubation-periods being reckoned from the day when the last egg was laid, except in the case of the Carrion-Crow, when the period was recorded by a marked egg in the clutch, and the Kestrel, where 29 and 32 days indicate the periods for the last and first eggs laid respectively; in both cases the periods were estimated from the day of laying, which was also the first day of incubation.

Species.	Cases.	Incubation-period in days.	Fledging- period in days.
B. Carrion-Crow (<i>Corvus c. corone</i>)	2	20-21	31-32
B. Jay (<i>Garrulus g. rufitergum</i>)	1	—	20
B. Yellow Bunting (<i>Emberiza c. citrinella</i>) ...	1	—	12-13
A. Mistle-Thrush (<i>Turdus v. viscivorus</i>)	1	12-13	—
A. Blackbird (<i>Turdus m. merula</i>)	4	12-13 (twice)	13 and 14-15
B. Blackbird (<i>Turdus m. merula</i>)	1	13	—
A. Redbreast (<i>Erithacus r. melophilus</i>)	1	—	14
B. Kestrel (<i>Falco t. tinnunculus</i>)	2	29-32	30-31
Kestrel with same adults, 1926		—	29-30
B. Stone-Curlew (<i>Burhinus æ. ædicnemus</i>) ...	1	25-26	—

In the case of the Stone-Curlew both eggs hatched simultaneously, thus making a difference of one day between the incubation-periods of the first and second eggs, these being laid on alternate days and incubated immediately.

W. D. SHAW.

LATE NESTING OF GOLDFINCH.

AT Sible Hedingham, Essex, in early May, 1927, I found a nest of a Goldfinch (*Carduelis c. britannica*) on the ground with broken eggs. By May 31st the birds had built a new nest in a rambler, within a few inches of where a brood was reared in 1926. This nest also came to grief. By mid-July they had reared a brood successfully in another rambler twenty yards away. On visiting the same garden on September 11th, I found another nest ten yards from the second attempt in another rambler with young ready to fly.

I firmly believe all four nests were built by the same pair of birds.

R. SPARROW.

LATE NESTING OF BULLFINCH.

ON July 16th, 1927, I found a nest of Bullfinch (*Pyrrhula p. nesa*) near Martock, Somerset, containing six fresh eggs. On July 28th I found another nest containing two eggs. This nest, which I consider belonged to another pair of birds, had a full set of four eggs on July 31st.

JOSEPH H. SYMES.

[The Bullfinch has been recorded as breeding till very late in the year. I have notes of nests with eggs in July as far north as Derbyshire; M. J. Kelly and H. G. Hutchinson have found nests with eggs and young early in August; A. Mayall records three nests with eggs or young on September 3rd (*Br. B.*, XIV., p. 160), and J. A. Walpole-Bond saw eggs on September 11th.—F. C. R. JOURDAIN.]

THE 1927 IRRUPTION OF THE CROSSBILL*.

THE digest of observations published below, with the notes which have already appeared, show that the irruption of Crossbills has been very widespread and on a very large scale.

It is to be hoped that readers will continue to send in observations, not only from localities whence the birds have hitherto been unrecorded, but also when a marked increase or decrease has been noted.

In addition to the notes published below I have received an interesting communication from Miss C. M. Acland, who says that on visiting the FEROES, amongst the first birds she saw on landing on July 8th were Crossbills. She saw small family parties on three of the islands she visited and they were reported from two other islands. After July 18th none was seen. Only two adult males were noticed, the rest being females and immature birds, and on one occasion

*For previous notes see *antea*, pp. 90-93.

Miss Acland saw a female feeding a young one. Except for a few stunted trees at Thorshavn there are no trees in the islands. Crossbills were recorded on July 2nd in the Færoes in the 1909 irruption (*antea*, Vol. III., p. 190).

While it is impossible here to trace the course of the migration on the Continent, it may be mentioned that Herr F. Steinbacher states (*Ornith. Monatsber.*, 1927, p. 150) that from July 4th to 31st Crossbills swarmed in the neighbourhood of CUXHAVEN. On July 16th to 17th when he visited HELIGOLAND there were many Crossbills there, and Dr. Drost had caught and ringed fifty in one day. Herr Steinbacher states that he only twice saw yellow males and never a red one, but that Dr. Drost had caught a few red males.

Mr. L. C. Le Toeq informs me that on August 18th he saw a small party of females and immature birds near Rozel in JERSEY, and on the 29th a single female in GUERNSEY.

SCOTLAND*.

SHETLAND.—In the first week of July Mr. W. L. McDougall reports (*Scot. Nat.*, 1927, p. 126) a number in the neighbourhood of Sumburgh.

ORKNEY.—A few days before July 19th, as Mr. T. A. Coward informs me, about six (two feeding on dandelion seeds) were seen by Mr. G. Ellison at Stromness.

N. UIST.—About July 9th, Mr. E. Beveridge reports (*Scot. Nat.*, 1927, p. 126), one was picked up on the shore:

SUTHERLAND.—During the first three weeks of July "considerable flocks" were seen by Mr. A. B. Gillett in the north-western part of the county (*Scot. Nat.*, 1927, p. 126). Mr. E. Cohen reports a flock of about fifteen on July 11th in the Dornoch district but considers it probable that these were residents.

INVERNESS-SHIRE.—In the last week of July Mr. W. Marshall noted an immigration in the neighbourhood of Nethybridge in larger numbers than he had seen since 1909. He knew of only two pairs of the resident form in the locality in the spring of 1927. The immigrants eat large quantities of spruce gall aphid (*Chermes abietis*).

ABERDEENSHIRE.—The large numbers reported (*antea*, p. 91) by Mrs. (not Mr.) P. Mackenzie from the Balmoral district were considerably lessened after August 26th.

*In observations made in the Highlands it is often impossible to distinguish between the resident form (*Loxia c. scotica*), which is subject to local movements, and immigrants from overseas.

PERTSHIRE.—About July 20th, Mr. G. Place informs me, a flock of about thirty (some adult males) arrived at Crianlarich and were still there a month afterwards. They had not been seen in this place before. They fed on the seeds of cones of larch, spruce and Scots fir.

On July 22nd Mr. D. G. Hunter observed a flock of about thirty in Glen Tummel, but as several of the adults were observed to be feeding the young ones it seems possible that these were locally bred.

FORFARSHIRE.—Between August 16th and September 1st Mr. W. S. Medlicott saw small lots (five to ten birds) at Fern ; on August 18th about fifty at Edzell golf course, near Brechin, and on the 22nd some up the Clova Valley, near Kirriemuir. From August 28th to September 4th Major M. Portal also reports two lots of seven and five from Clova Valley.

BERWICKSHIRE.—On August 6th in *The Scotsman* the Rev. W. McConachie reports a number in the Lauderdale woods.

NORTH SEA.

On July 1st, Dr. B. B. Riviere informs me, a flock of eleven came on board the East Dudgeon Light-Vessel and, after resting an hour, flew off to the W.S.W. On the 2nd a flock of five came on board the same Light-Vessel in the afternoon and after a few minutes stay flew off W.S.W. On July 21st one was brought into Yarmouth in a fishing boat, and about the 10th Mr. A. H. Patterson received word that one was caught in a boat off Yarmouth. On July 15th, Mr. W. S. Medlicott writes, three (adult male and female and immature) were taken eighteen miles off Hartlepool in a fishing boat.

ENGLAND AND WALES.

CUMBERLAND.—On July 11th, as Mr. R. Graham informs me, a boy caught one (immature plumage) in an emaciated condition in a hedge near Carlisle.

YORKSHIRE.—On July 21st Mr. R. Graham received information of an immature Crossbill in a weak condition caught on the railway at Blea-Moor in the north-west of the county. On July 15th, Mr. W. S. Medlicott is informed, a female and four young were seen at Whitby. On August 6th Mr. W. J. Clarke received one which was picked up dead near the same town. On August 26th, Mr. E. W. Wade informs me, three were seen at Kilnsea (Spurn Point) by Mr. G. E. Clubley, and on September 19th four more.

LANCASHIRE.—During the week ending July 16th, Mr. R. Fortune reports (*Nat.*, 1927, p. 275), about sixty passed through the neighbourhood of Greenfield near Oldham.

CHESHIRE.—“On July 9th and 12th,” Mr. Coward writes, “Mr. H. Harrop saw about forty, including some red males, in dwarfed oaks on the hillside above the Stalybridge Reservoirs. On the 13th he estimated the largest flock to number about sixty. On the 15th my wife and I saw a flock of fully sixty, and several smaller lots and odd birds. So far as we could make out they were feeding on the larvæ of defoliating caterpillars, and Mr. Harrop said that he saw some nip off oak-leaves. As the green oak-tortrix was just emerging, I suspect that the birds were nipping off the rolled leaves in which were pupæ of this moth. I see that Seeböhm mentions the larvæ of this tortrix as being fed upon. Mr. Harrop tells me that the birds stopped for nine days.”

On July 20th Mr. N. Abbott saw about twenty on Alderley Edge.

On or about July 13th, Mr. A. W. Boyd informs me, Crossbills were first seen in the Delamere Forest district. Mr. G. F. Gee, who saw about thirty there on July 27th, was told by Mr. Gordon that they had been present for a fortnight. Mr. R. M. Garnett saw eight there on July 24th, and Mr. and Mrs. Boyd saw several score on July 30th and 31st. In another fir wood in the forest they were first seen on July 31st, and on August 6th Mr. Boyd saw a large number there—computed to be between forty and fifty. It is interesting to note that in this locality a dead male was picked up in September or October, 1926. Mr. Boyd saw one or two adult males in each locality but could not guess at the proportion of adult males. The birds were feeding on larch cones to some extent, but principally on green cones of Scots fir.

On September 4th Mr. H. A. Gilbert saw six near Helsby and reports that a pair was seen there “some time ago” by Mr. A. C. Gladstone.

DENBIGHSHIRE.—On September 8th Mr. C. Oldham saw six in a field of standing oats at Llanellian.

WARWICKSHIRE.—Writing on September 6th, Mr. H. W. Mapleton-Bree states “for several weeks this summer” small flocks visited his garden near Coventry. They were feeding chiefly on larch cones.

WORCESTERSHIRE.—On July 23rd Mr. T. J. Beeston saw one at Wolverley, and a keeper there, who became well acquainted with Crossbills in the 1909 irruption, saw a large flock early in August. Mr. Beeston states that their numbers are now (September 15th) lessened but some are still present and feed on fir cones as well as visiting gardens for *aphis*.

SOMERSETSHIRE.—On August 11th Mr. T. J. Beeston saw one at Dunster and on the 12th three at Minehead.

DEVONSHIRE.—On August 30th, at 11 a.m., Dr. T. G. Longstaff, on Lundy Island, saw a flock of about a dozen fly off the island to the north-east and at noon on the same day saw one eating honeysuckle berries. On September 3rd two were seen on Lundy Island.

On August 2nd and subsequently to the 29th Mr. W. Walmesley White saw one or two at Budleigh-Salterton.

DORSETSHIRE.—On July 24th, the Rev. F. L. Blathwayt informs me, one was picked up freshly dead on Chesil Beach, and on August 2nd parties up to twenty in number were seen in fir trees at Abbotsbury.

On September 9th Mr. H. Lacey saw four or five near Corfe Castle feeding on thistles.

ISLE OF WIGHT.—On September 7th Mr. W. D. Shaw saw eight on Culver Cliff, near Sandown; on the 12th single birds, and on the 17th ten there and a dozen at Bembridge, and single birds on the 10th and 12th near Shanklin. Adults as well as immature birds were noted and they were seen feeding on seeds of thistle, hawkweed, lesser knapweed and in one case blackberry buds. On August 24th Mr. C. W. Colthrup saw a pair feeding a fully fledged young one on yew berries at Ryde, and on August 28th, September 1st and 4th he saw a Crossbill at Shanklin.

HAMPSHIRE.—In the first week of July Major J. H. Norton saw fifteen to twenty at Upham, and from then until the end of the month (when he went abroad) six or eight every few days. They fed chiefly in larches, less often in Scots fir.

WILTSHIRE.—On June 18th Miss B. Wigram saw three in a hedge near Cricklade. On July 31st Mr. C. C. Butler reports (*Field*, 8.IX.27., p. 395) seeing two near Marlborough and at the end of July, Mr. L. G. Peirson informs me, a small flock was seen in Ramsbury Park.

SURREY.—On July 6th Mr. H. Bentham saw twelve at Tadworth and on subsequent dates up to August 18th varying numbers from one to twenty. On July 19th Mr. Bentham saw two flocks (of nineteen and three) at Kingswood and on the 31st two birds on Epsom Downs.

From about July 15th to the time of writing (September 20th) Mr. D. W. Musselwhite has seen flocks of from seven to twenty-three at Horsley, and on July 28th a single bird near Dorking. These were in larch trees.

On August 6th Mr. R. W. Hale saw two at Ealing feeding on a white growth in an apple tree.

SUSSEX.—On September 5th Mr. H. Bentham saw a flock near Rye and on the 6th one bird at Burgess Hill.

BERKSHIRE.—From about the middle of July, Mr. D. W. Musselwhite informs me, there were flocks of from five to about twenty at Burchett's Green in larch trees.

ESSEX.—On July 25th Mr. W. S. Jones saw one at Leigh-on-Sea and was informed that a small flock had frequented a garden during July 10th to 28th.

SUFFOLK.—From July 10th to the end of August up to forty were present in the neighbourhood of Belton, as I am informed by Dr. B. B. Riviere and Mr. E. A. Ellis. The same observers give details of several between July 19th and August 4th about Fritton, and with Mr. A. H. Patterson note a number of occurrences in small numbers between July 23rd and 27th in the district of Great Yarmouth and Gorleston. At Belton and Great Yarmouth they were frequently seen in apple trees, and about Fritton they frequented Scots pine while two were found dead in the lake.

NORFOLK.—On July 18th Mr. S. Boardman saw one at Palling-on-Sea, and on the 27th, Dr. B. B. Riviere states, one was picked up dead at Happisburgh. Mr. N. Tracy states that in the Castle Rising district Crossbills had become very scarce, but on July 20th he saw a flock of eight and about this time heard several small flocks flying over, while numerous worked fir cones now lie about.

LINCOLNSHIRE.—As additional to his previous notes (*antea*, p. 93), Mr. J. S. Reeve writes that the birds were seen at Leadenham, near Lincoln, up to about August 25th, since which they appear to have left. He also notes that on August 4th small parties were seen at Harmston, and on August 10th and 11th twelve to fifteen near Boston.

ISLE OF MAN.

On July 29th Colonel H. W. Madoc was informed of Crossbills in a fir plantation in Sulby Glen, and on visiting the place on the 31st saw about twenty (adults and immature) in scattered parties. He was also informed of others seen in plantations near Ramsey. On August 2nd Col. Madoc, visiting the Calf, found thirty to forty and then a larger flock of about eighty to a hundred. These were on the moor in heather and appeared to be feeding on caterpillars. Later in the day he saw a number in a tree. On August 22nd Col. Madoc saw a small lot near Ramsey. On August 31st Mr. C. Oldham saw a party of six at Bride.

IRELAND.

WICKLOW.—On July 20th Mr. C. B. Moffat saw many small flocks at Fassaroe, representing a considerable increase of

the birds usually breeding there. Mr. Moffat also saw a party at Glendalough on June 6th.

DUBLIN.—Mr. Moffat is informed by Professor A. F. Dixon that great numbers have been feeding about Kilternan "all through the summer." On September 9th Mr. E. M. Nicholson saw a single bird at Cabinteely. In the first week of August, Colonel H. A. F. Magrath informs me, three were seen feeding on thistles by Major C. V. Walshe on the top of the Hill of Howth.

GALWAY.—On August 19th Mr. E. M. Nicholson saw a small party near Recess feeding on rowan berries in an almost treeless valley.
H. F. W.

MELODIOUS WARBLER SEEN IN IRELAND.

ON August 29th, 1927, I watched, in a garden near Merrion Square, Dublin, a bird which I feel sure was a Melodious Warbler (*Hippolais polyglotta*). Since the identification is not a simple one and the specimen was allowed to depart unmolested it seems desirable to place the fullest details at your disposal. At about 1 p.m. (summer time) I was called to the window by an unexpected note—a clear musical version of the "tu-ee" common to several small Warblers. Looking out, I saw a bird of that description take wing with graceful, hesitating flight from a hawthorn tree outside and head south-east at about 40 feet above ground; but this elevation left him below housetop level, and being hemmed in by a wall of roofs he checked himself, wheeled, and returned to his starting-point. In this tree and a neighbouring ash he remained for several minutes, moving about in full sunshine within a dozen yards of where I sat at a slightly higher level, with my field-glasses trained on him and my elbows firmly resting on the sill—in short the conditions for observation could hardly have been improved. At the outset the pronounced and unmistakable bluish tint of the long feet, characteristically displayed when the bird sat back on a spray, warned me that it was a question between the Melodious Warbler and the Icterine (*H. icterina*), and I concentrated my efforts on the few points of distinction valid in the field. (I should perhaps explain that I happen to have made a close study of the Icterine, part of my observations on which were published in *British Birds* some years ago (*antea*, Vol. XVI., p. 142). Moreover, I had only returned three weeks before from a trip through Germany, Italy and S. France, during which I had plenty of opportunities to observe the two species at home. The images of both are fresh in my

mind). This bird looked definitely smaller than any Icterine I remember ; the yellow tint was very strong all over the underparts, most particularly about the tail-base ; the superciliary streak was broad and striking and the mantle very deep green. In plumage, in note, and in manner (for instance, in the trick of restlessly flirting the tail) it was identical with a definite Melodious Warbler I had watched at equally close quarters in S. France only a month before, except in one detail—the mantle did not in this case appear so dark a shade of green. Not much significance need be attached to that, since lighting might be responsible ; in France I did all my observation in the early morning. Another point on which I rely is the build. There is here a distinction appreciable enough in the field but only roughly expressible in words. The Icterine is rather a Flycatcher-like bird, and in a good flight-view the long pointed wings always strike my eye. The Melodious looks more compact, and is shorter and rounder-winged. Now on two occasions this bird went through its paces in the air on a level with my eyes—once when it faltered and came back, again in finally circling round before flying away. I saw the wings and flight perfectly. My brother, who also watched, aptly compared the proportions to a Chiffchaff's ; an Icterine's proportions being, of course, more like a Willow-Wren's. No one is better aware than I am of the difficulties of making this identification in the field without hearing song, and on the Continent I have often left an open verdict on birds which I could not see enough of to satisfy me. I should not record this wanderer as *H. polyglotta* if I did not feel perfectly confident in my own mind that no reasonable doubt of the correctness of the identification remains. It is because the personal factor must count for much in these cases that I have gone into all this detail.

I see the *Practical Handbook* only accepts without reserve a single previous Irish record ; the chances against recognition are, of course, exceptionally heavy here.

E. M. NICHOLSON.

BLACKBIRD SECURING A SECOND MATE AFTER DEATH OF FIRST.

THIS spring a pair of Blackbirds (*Turdus m. merula*) nested in some ivy in my garden at Buckhurst Hill, and after the young were hatched the male met with an accident and I found him dead under the garden seat. The hen seemed distraught for a couple of days, but on the third she found a new mate which took his turn at feeding the youngsters, all

of which flew in due course. Later they built again, or rather refurbished up the old nest, and on August 7th I found three unfledged nestlings looking healthy and being fed by both parents in turn.

A. B. HORNBLOWER.

BLACK REDSTARTS IN SUMMER IN LONDON.

On April 27th, 1927, a male Black Redstart (*Phœnicurus o. gibraltariensis*) appeared in the precincts of the Natural History Museum at South Kensington. The bird, though restless, was fairly tame and often came near enough to be closely studied. It was a year old bird not yet in fully adult plumage. On April 30th a female appeared, or in any case was first seen. As the birds seemed to be settling down, and were taking mealworms thrown out of my window in the preparator's studio overlooking some rough ground, great hopes were entertained that they might breed in the nesting boxes put up in several places. After a week of regular feeding they became so tame as to take meal-worms freely from the window sill, a distance of three feet from where we were standing. During the time when the male was not in search of food he would sing on the highest points of the building, coming down in a curious flight to the female.

On May 16th the female disappeared, either having moved away or become the victim of a cat. From then onwards the male never came to be fed, but remained at the other end of the grounds singing on the Museum or adjacent buildings, until about July 20th. Since this date he has been seen only occasionally, and as he had not appeared for a month after August 16th it was thought that he had left. but to-day, September 16th, he has been seen again. These birds, by their charming appearance and actions and the delightful little song of the male, gave the staff much enjoyment, and it is greatly to be hoped that we may have them again next year.

A. H. BISHOP.

OYSTER-CATCHER IN LONDON.

On August 30th, 1927, at 5.30 p.m., when paying a visit to Barn Elms Reservoirs, I saw an Oyster-Catcher (*Hæmatopus o. ostralegus*) circle one of the sheets of water several times and then pass off south-eastwards down the Thames towards Putney Bridge. The bird called repeatedly, and once it hovered with lowered legs over the water but did not alight.

L. PARMENTER.

LITTLE GULL IN YORKSHIRE.

ON August 10th, 1927, from the end of the pier at Whitby, I saw an adult Little Gull (*Larus minutus*). There were some Black-headed Gulls in the neighbourhood, but the jet-black head, dark under-wings and smaller size, rendered the identification of the rarer bird easy.

The rounded "Peewit" like wings and more creamy coloured body than in the Black-headed Gulls, contrasting with the pitch-black head, made the smaller bird the more pleasing to the eye. The flight was hovering and desultory.

I caught a glimpse of it again on the evening of the 11th and the morning of the 12th.

Are not these dates rather early for this bird to be seen on autumnal migration?

T. J. OUTRAM.

[Little Gulls are recorded (*B. of Yorks.*, II., p. 669) from Flamborough on July 12th, 1868, and August 5th, 1886. Eds.]

LETTER.

"HOW BIRDS LIVE."

To the Editors of BRITISH BIRDS.

SIRS,—Since I have already given my opinion as to what I said in *How Birds Live* and Mr. Jourdain has reiterated his, no more can profitably be written on the subject. I should be sorry further to weary the readers of *British Birds* with trivialities.

Yet on the pure question of the limits to any increase of birds of prey I do feel called upon to defend the only view compatible with the territorial theory against its critics. That view is that the bird population as a whole is subject to definite laws from which birds of prey are not exempt. The fundamental law may be expressed thus: *the breeding organisation of a given species in a given locality tends to vary in direct ratio to the abundance of accessible food-supply*. Put it this way. The effective range of a hypothetical Falcon feeding solely on birds is x square miles; the quantity of prey required to support a family is y ; and on a long-period average it requires a bird population of z to yield y . These three may be taken approximately as constants; the main variable is the density of food-supply. If the bird population of x square miles is less than z , no breeding Falcons can be supported; if x square miles have z or more birds the species will exist, primarily, on a strictly territorial basis. But when the population of x square miles rises much above z , the claim to all x will not be strictly enforced, so that an area of $4x$ square miles may support, say, six pairs of Falcons, still on a territorial basis. (We must bear in mind that x represents *the limit* which can be hunted over regularly. An ideal territory may have an area of only $\frac{1}{4}x$ or $\frac{1}{16}x$, in which case no tendency to communism will occur before x holds 16 z .) Now suppose an area of x square miles with a bird population of not z but 100 z . Obviously such an area will yield something like 100 y —that is, enough food to support 100 broods of Falcons within the potential range of one pair. In that case the territorial system will disappear, either spontaneously or on being

challenged, and (excluding such factors as human persecution) the way will lie open for a colony of up to 100 nests.

And *mutatis mutandis* the same applies to all birds. Now it is clear that with small insectivorous species, where x is only a few acres, and with birds of prey, where z represents a considerable number of birds, mammals or reptiles, the chances of passing beyond a strictly territorial organization are slightest. Although there is no *absolute* innate prohibition against their becoming sociable, the physical handicap of short range, or the need for many victims high in the scale of life, will militate against their becoming so in practice. And while territory is thus imposed on them, as it normally is, the "fierce unreasoning jealousy" I spoke of is from their very nature stronger in the Hawks than in any others; it allies itself with innate raptorial qualities. In their case z can rarely bear a high ratio to x , though where it does so tolerance and eventually communism will supervene.

So far as I know few attempts (and those poorly backed by observation) have previously been made to ascertain x , y and z in the case of any particular species. It can be done, and I hope other naturalists, outside the Oxford Bird Census, will help to do it. But, while I am not yet in a position to give Mr. Jourdain exact figures, I feel pretty sure that the ratio required to support communism among birds of prey is rarely reached, at least outside tropical and sub-tropical countries. Yet this, I should be the last to deny, must be put to the test of statistical observation. (The figures given by Mr. Jourdain of numbers of birds of prey shot in Sutherland a century ago (*antea* p. 72) are misleading; as he must be well aware wherever such intensive persecution goes on there is steady immigration from distant or neighbouring areas so long as the supply lasts. Thousands of Kestrels have been shot in a few years on one estate, but that gives no scientific proof of any unusual density of Kestrel population; only of the damage that can be done by an unusually ignorant and destructive landowner.)

I have done my best to state the main issue clearly, and I am curious to know what Mr. Jourdain thinks about it. Is his disagreement based only on the incidental details of my groping and somewhat clumsy attempts to state this law, or does he dispute the law itself? Since that law is a clear corollary of the territory theory, to question it would seem to me sheer fundamentalism in ornithology, and I will not believe, without his explicit assurance, that Mr. Jourdain really differs from me on the essential issue. For, after all, the precise point where the limitation takes effect is no great matter compared with the question whether or not such a limitation of numbers exists. If there is any valid disproof of what I have tried to express I should be glad to hear it. And if there is no valid disproof, the assertion that we must keep down birds of prey or they will get out of hand, and so on, can no longer be repeated with impunity.

In conclusion, I should like to apologize to Mr. Jourdain for the unjustifiable remarks on 'the one aberrant specimen,' etc., which I put down in the heat of the moment. I am grateful to him for compelling me to develop my point more fully; the criticism of such an authority, even when it seems misdirected criticism, is to be valued far above the woolly and unhelpful praise too often meted out to bird books of every description.

E. M. NICHOLSON.

[With the views expressed so clearly by Mr. Nicholson in the second paragraph of the above letter, I am in entire agreement. There is no doubt that the accessible food supply is by far the most important

factor in determining the density of population in any given area. Other points, such as the presence of breeding sites, have to be considered, but this is, as Mr. Nicholson states, the fundamental law.

To my mind, territorial jealousy is a symptom that for countless generations the species has reached a level approaching the maximum density. I do not think that the presence of so many Raptores in scattered pairs over wide areas is due to this cause (except possibly in the *Astur-Accipiter* group) but rather to the interference of man. Under purely natural conditions the superfluous produce of a Grouse moor would be accounted for by "vermin" to the extent of some 90 per cent. Man steps in and takes the 90 per cent., attempting at the same time to eliminate the vermin. When the restrictions are relaxed, the surviving Raptores increase with extraordinary rapidity, and will continue to do so until stabilized either by food scarcity or by artificial restriction.

Among the European Raptores the communistic stage has been reached by the Lesser Kestrel, the Red-footed Falcon and Eleonora Falcon, while it is frequent among the Kites, and is also characteristic of the American Osprey. The cases quoted with regard to the Golden Eagle, Sea Eagle, etc., show that territorial jealousy is practically non-existent when the food supply is ample, but sites are scarce.

I do not think the Sutherland figures quoted by me are misleading, for a glance at the map will show that on the north and west the county is sea girt: the east Caithness moorlands are unsuited as breeding ground, while it must not be forgotten that the campaign against the birds of prey was waged with equal bitterness in the southern Highlands and began earlier as the moors were more accessible. Moreover, those were not the days of breechloaders and it is probable that nearly all the old and young birds obtained were killed at the eyries. I only quoted one or two cases, but the few records of the destruction of vermin from other Scotch areas which exist are equally startling.

No more useful work can be done than *systematic* census making of the bird population, and it is much to be wished that local Natural History Societies would take up this branch of bird study and provide the raw material for future research.

It is satisfactory to note that Mr. Nicholson realizes that in scientific discussion the object is not to score a debating point against one's opponent, but by elimination of error to arrive at truth.—F. C. R. JOURDAIN.]

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TRAPS FOR BIRD RINGING.

BY

FREDERICK C. LINCOLN,

Associate Biologist, Bureau of Biological Survey, United States
Department of Agriculture.

PROGRESS in science is usually dependent upon the perfection of the methods developed and employed for the accumulation and digestion of fundamental data. The study of birds in a state of nature is no exception, and while much has been learned from painstaking observations by competent students, the net result of their labours has left much to be desired.

The advent of the ringing, or banding, method to ornithological research was promptly hailed as a means of obtaining a still greater degree of precision concerning the migratory flights that twice each year carry untold thousands of birds north and south, together with many other pertinent facts concerning their life histories. In applying this method, it was natural that attention would be given first to fledglings as they are the most readily obtainable, but it seems somewhat surprising that the systematic trapping of adults should have been so long delayed. Mortensen, the pioneer in these activities, was apparently the first⁽¹⁾ to employ traps extensively for this purpose. Despite the success that attended his efforts and although ringing came rapidly into prominence, the full possibilities of trapping remained for many years unappreciated. In 1911, Thomson⁽²⁾ referred to this method, and in his first report⁽³⁾ many cases are listed that were obtained through the activities of certain of his co-operators who "used simple clap-nets, automatic cage-traps, or other harmless appliances." Traps also were used for this purpose in Hungary and possibly in other countries.

The idea of advancing ornithological studies through the systematic trapping of adult birds seems, however, to have been brought prominently into the foreground by S. Prentiss Baldwin, whose paper⁽⁴⁾, delivered at the meeting of the

(1) Mortensen, H. C. C. "Ringfugle." *Dansk Ornithologisk Forenings Tidsskrift*, Vol. I., pp. 144-155, 1907.

(2) Thomson, A. Landsborough. "The Possibilities of Bird-Marking with Special Reference to the Aberdeen University Bird-Migration Inquiry." *Proc. Royal Phys. Soc. Edinburgh*, Vol. XVIII., No. 3, pp. 204-218, 1911.

(3) Aberdeen University Bird-Migration Inquiry: First Interim Report (1909-12). *The Scottish Naturalist*, July, August, October and November, 1912; February, April and June, 1913.

(4) Baldwin, S. Prentiss. "Bird-Banding by Means of Systematic Trapping." *Abstract Proc. Linnæan Soc. New York*, No. 31, pp. 23-56, pls. I-VII., 1919.

American Ornithologists' Union in New York City, on November 11th, 1919, was directly responsible for the development of this method in North America.

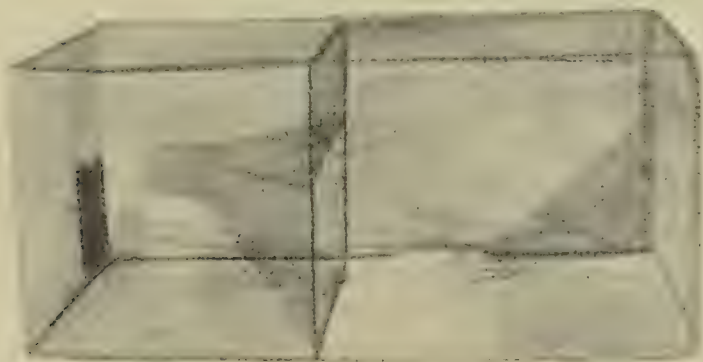


FIG. 1.—“Government” Sparrow Trap, shown against white background to bring out the position of the funnels.

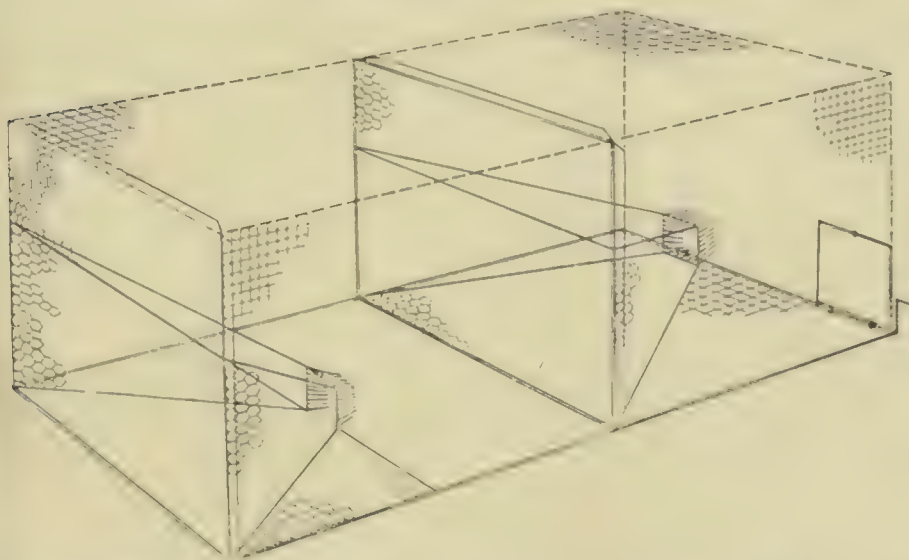


FIG. 2.—Phantom drawing of “Government” Sparrow Trap. Note the guard wires attached to the mouths of the funnels.

Appreciative of the possibilities opened through this manner of attacking the problems concerned, the Bureau

of Biological Survey of the United States Department of Agriculture took up banding work as a means of furthering its investigations of the species protected under the terms of the Migratory-Bird Treaty between the United States and Great Britain. The period that has elapsed has witnessed

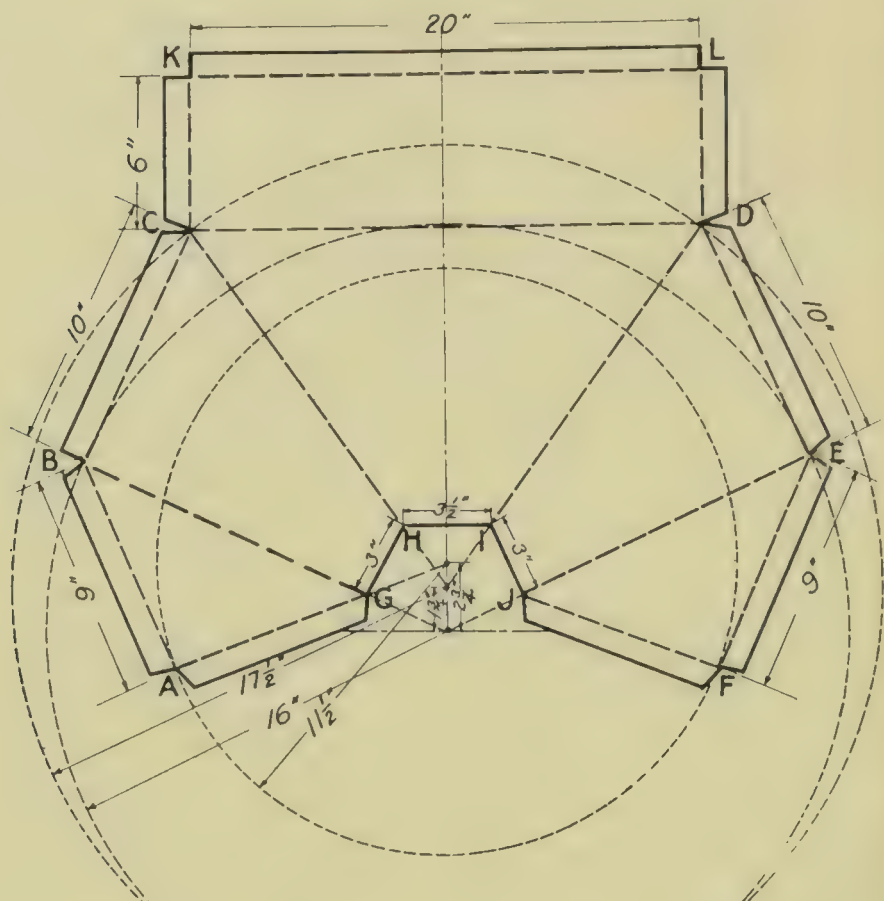


FIG. 3.—Pattern for first funnel, "Government" Sparrow Trap. Draw a horizontal line near one edge of a large sheet of paper, and erect a perpendicular line through the centre of the sheet. Point of contact of these lines is centre for a circle with a 16-inch radius. Measure up $1\frac{3}{4}$ inches and $2\frac{3}{4}$ inches on the perpendicular and draw circles with radii of $17\frac{1}{2}$ inches and $11\frac{1}{2}$ inches respectively. Draw line CD at right angles to perpendicular and follow with lines CB, BA, AG, DE, EF, and FJ. Draw lines GH, HI, and IJ; then lines BG, CH, DI, and EJ. Add section CKLD and one-inch flaps on all exterior edges.

important progress in the development of suitable traps.

Mr. Baldwin's early work was done largely with a commercial cage trap of the "Government Sparrow Trap" type,

so called because it was designed by the Biological Survey for use in the control of the House-Sparrow (*Passer domesticus*). This trap, being fairly well known, has continued to be a general favourite at most trapping stations. Recent improvements have added much to its efficiency. It is suitable for almost all ground-feeding species up to and including those the size of Doves and Quail.

As shown by the illustrations (figs. 1 and 2) this trap is a simple cage, measuring 35 inches long, 20 inches wide, and

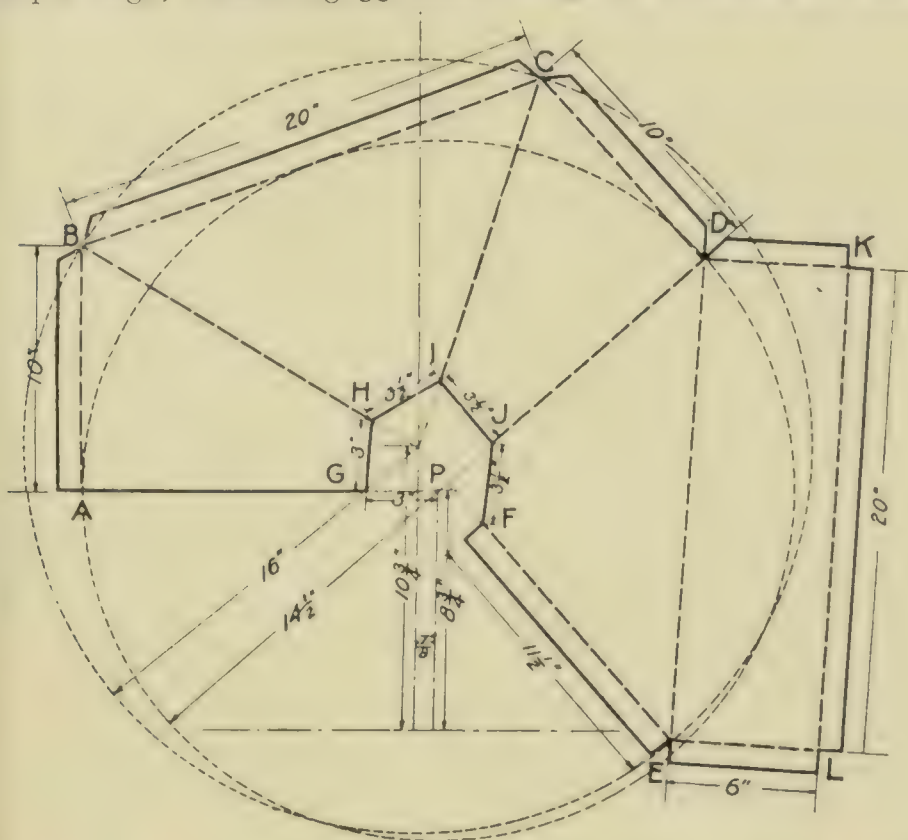


FIG. 4.—Pattern for second funnel, "Government" Sparrow Trap. Made in a manner similar to Fig 3. First lay off horizontal and perpendicular lines. Measure up $10\frac{3}{4}$ inches on perpendicular for centre of circle with 16-inch radius. To right of perpendicular erect second line $\frac{3}{8}$ -inch distant and $8\frac{3}{4}$ inches high to establish point for circle with $14\frac{1}{2}$ inch radius. Begin with line AP at right angles to perpendiculars, and follow with lines AB, BC, etc.

16 inches high, which is a good size for most work, as it is not cumbersome or heavy. It is divided into two compartments, entrance to the first or outer chamber being through a half-funnel, and from there to the second chamber through a complete funnel, which also forms the division between

the two chambers. The outlet of the first funnel is on the ground, while that of the second funnel is elevated to about the centre of the trap. Each outlet is protected by a series of light "guard wires" attached to the netting of the funnels and projecting 4 or 5 inches into the chambers beyond the funnel mouths.

The two sides and the back may be made from a single piece of netting, the best type being No. 3 (three meshes to the inch) hardware cloth. The funnels, top, and bottom of the second chamber may be made of $\frac{3}{4}$ -inch-mesh poultry wire. There is no bottom or floor on the outer chamber, except the corner areas that are covered by funnel braces. The only difficult feature in connection with the manufacture of this trap is the proper cutting and shaping of the funnels, but by the use of paper patterns, prepared in accordance with the diagrams (figs. 3 and 4), this trouble will be easily overcome. A door about 6 inches square, for removing captured birds, should be provided in the rear chamber.

In addition to the sparrow trap, the old and well-known "sieve" or "drop" trap, operated by a cord in the hands of the trapper, also came into immediate favour. The general simplicity of such traps and the fact that birds are taken only when the operator is ready to band them continue to recommend them, particularly to the co-operator with limited time to watch his traps. The No. 3 hardware cloth is readily fashioned into a tray 3 to 5 feet square and from 6 to 10 inches deep, or a wooden frame may be used for the sides. The trays are, of course, inverted over the bait, and supported on one side by a "trip-stick," to which the "pull-string" is attached.

Although such traps are efficient, they occasionally kill a bird, particularly when several are on the bait at the same time. For this reason, a trap that was originally developed by the officers of the North-eastern Bird Banding Association⁽¹⁾ is considered preferable. It is sometimes known as the "Beginner's Flat Trap," but is by no means limited to the tyro, as many productive stations largely depend upon it for their major results. As shown in the illustration (fig. 5), it is made entirely of hardware cloth and is about the same size as any other drop trap. (3 feet square, and 6 to 10 inches high, is a good size for most work.) Instead of being rigid, the

(¹) As a means of co-ordinating the activities of bird-banding co-operators in the United States and Canada, four regional Associations have been organized.

sides and top of this trap are made in separate pieces, which should be reinforced around their edges with No. 10 wire. The sides are fastened to the top by means of small wire rings, and when set the trap stands on three sides, the fourth being held horizontally by means of the trip-stick. The great advantage of this trap is that birds are scarcely ever injured in it. Even if they should be struck by the descending side, the weight and speed is insufficient to do more than push them back into the trap.



FIG. 5.—Flat, or Drop, Trap. This is considered the best model of this type of trap, as it rarely, if ever, injures a bird.

A little attention to the trip-stick will repay the time expended. By cutting it into two pieces, which are then fastened together with a small hinge and which will cause the stick to collapse when the string is pulled, the speed will be increased and also swaying will be more or less eliminated.

As bird-banding work progressed, many additional types of traps were developed for the capture of ground-feeding species, and of these one worked out by Miss Jessica A. Potter, of Los Angeles, California, is unquestionably of great merit. This trap, which has vertically sliding doors, is fundamentally a one-bird trap, but it is usually built with

two, four, or eight compartments. The one figured (figs. 6 and 7) is the most popular type and may be described as follows :—

Eight frames are made from stiff wire of about No. 12 gauge. Three of these should measure 8 by 18 inches and the others 8 by 8 inches. The larger frames are for the top, front and back, while the smaller ones are for the two ends and three partitions. The bottom is left open. As this is a small trap, the frames should be carefully made and the ends of the wires soldered or welded together. The smaller frames may be covered with $\frac{3}{4}$ -inch poultry wire netting, but the top and sides should not be covered until the cage is assembled. The netting can be attached by lacing with copper wire, but soldering is preferable⁽¹⁾.

On one of the larger frames (which will be the front) a piece of No. 12 wire is attached longitudinally $3\frac{1}{2}$ inches from one side. This $3\frac{1}{2}$ -inch space will be the area *not* covered by the closed doors.

The cage should now be assembled, which may be accomplished by merely lacing the sides, top, and ends together with copper wire. Remember that the $3\frac{1}{2}$ -inch space of the front is the upper part. A piece of $\frac{3}{4}$ -inch-mesh wire netting 18 by $19\frac{1}{2}$ inches is used to cover the back, top, and upper part of the front, and the three remaining small frames are fastened into the cage so as to divide it into four compartments $4\frac{1}{2}$ inches wide.

The doors are made by covering with wire-netting frames that measure $3\frac{1}{2}$ inches wide and 5 inches high and that are made from No. 12 wire. Across each door on the outside two wires are soldered, one about $\frac{1}{2}$ inch from the bottom and the other $1\frac{1}{2}$ inches from the top. These wires should project about $\frac{3}{4}$ inch on each side so that they may be bent into hooks that will engage with the "slides." As the doors slide outside the cage it is necessary to attach slide rods or wires to the front frame. For this purpose, eight No. 12 wires, each 9 inches in length, are used. The ends of these wires are given $\frac{1}{2}$ -inch right-angle bends, care being taken to see that the $\frac{1}{2}$ -inch sections on each piece are parallel. They are then soldered across the front frame from top to bottom, so that the body of the wires will project $\frac{1}{2}$ inch beyond

(1) This trap is usually made so it can be folded up, a feature readily worked out by use of wire rings, but, as the trap is small, the collapsible feature is not a prime necessity. Accordingly, it is here described as of rigid construction.

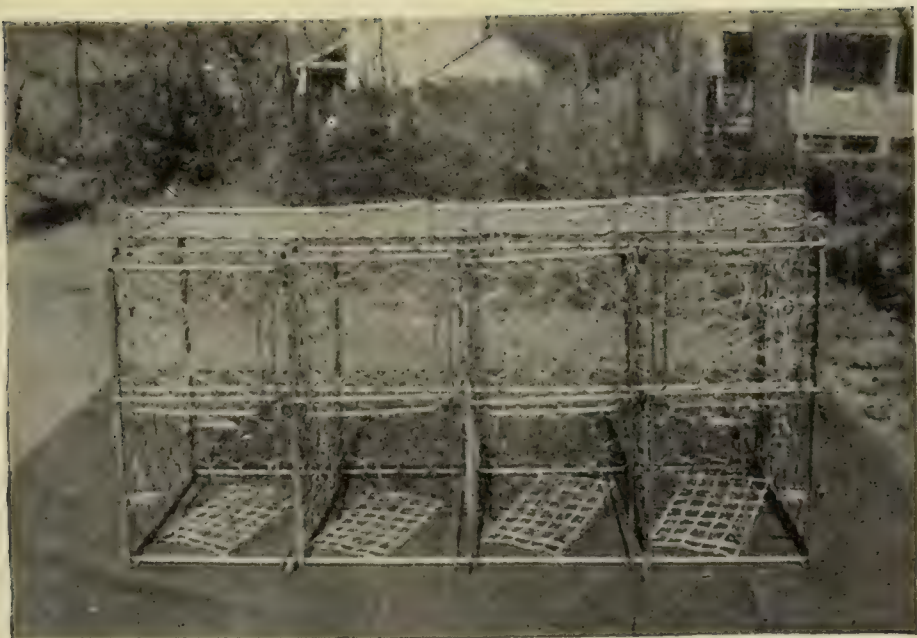


FIG. 6.—Potter Trap. Readily made with varying number of compartments.

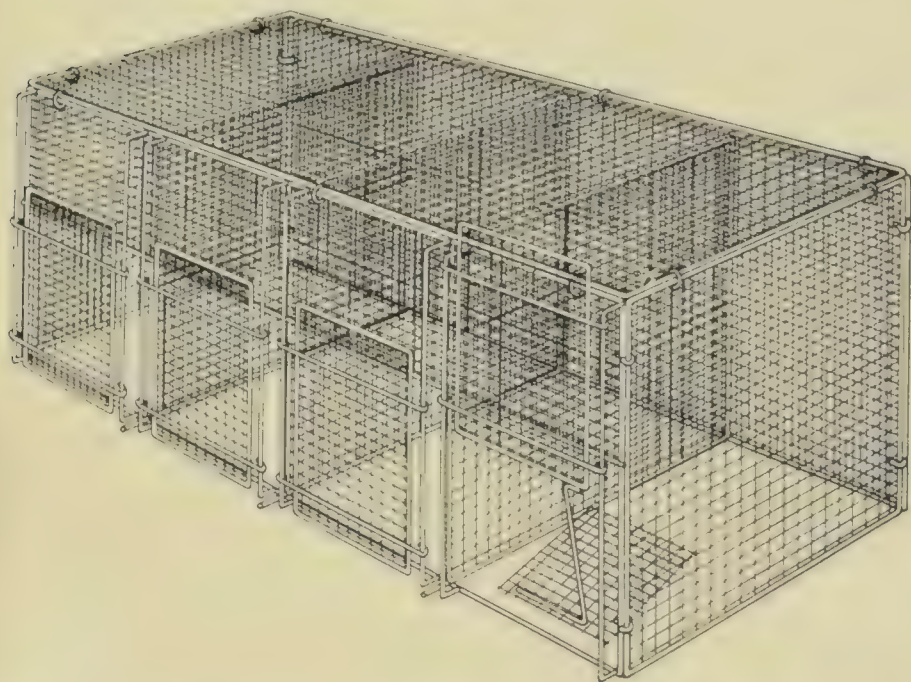


FIG. 7.—Potter Trap, showing details of construction. Note the way in which the doors are attached to the "slides" and how the trigger is placed when the trap is set.

the front of the trap. The spacing from end to end on the frame should be : End, $\frac{1}{4}$ inch, 4 inches, $\frac{1}{2}$ inch, 4 inches, $\frac{1}{2}$ inch, 4 inches, $\frac{1}{2}$ inch, 4 inches, $\frac{1}{4}$ inch, end ; total length of the trap, 18 inches. The doors are attached to these slides by the simple expedient of bending into hooks the projecting wires that were attached for the purpose. These hooks should fit loosely around the slides so that the doors will work up and down easily.

The triggers for this trap have been referred to as "trip-doorsteps" from the fact that they are set just inside the door so that birds entering the trap trip them immediately. One is used in each compartment. For each trigger a piece of either No. 2 or No. 3 hardware cloth measuring $2\frac{1}{2}$ inches wide by $3\frac{1}{2}$ inches long and a piece of fairly stiff wire of about No. 14 gauge, $7\frac{1}{4}$ inches long, are needed. The wire is first woven into the hardware cloth near one end and then bent at right angles perpendicular to the hardware cloth. The upper end is then given a $\frac{1}{2}$ -inch right-angle bend on which the bottom of the door rests when the trap is set.

In operation, bait is scattered thinly in front of the trap and more thickly on the ground in the back part of the compartments. Each door is raised and a trigger placed inside, back just far enough so that in engaging with the door the back part of the hardware cloth will be elevated about half an inch. Such "sets" may be made very delicate, and they have the added advantages of being "sure catch" and of scarcely ever injuring a bird.

All the traps described above are intended primarily for the small ground-feeding species and will not be found satisfactory for a few groups that are reluctant to go under an obstruction or for which water is a more effective bait. For these birds a top-opening trap is preferable, and excellent results have been obtained with the "Chardonneret Trap." Information concerning this device was furnished to the Biological Survey by J. B. Harkin, Commissioner of Canadian National Parks, Ottawa, Canada.

This is another trap that can be constructed with several compartments, but as ordinarily used two cells are satisfactory. Those shown in the illustration (fig. 8) are cubical, measuring 12 inches each way. The frame is made from light strips of wood and is covered with No. 3 hardware cloth. The central partition also is of this material. Each compartment is supplied with a small door in a lower corner and a 6-inch opening in the top. It is not necessary to have any

framework around the top openings. To make each of the top doors, four light strips of wood are required, those for the sides and bottom being 6 inches long, while the fourth should be 8 or 9 inches in length. This longer piece is attached through the centre of the door so that it will project 4 or 5 inches beyond the bottom. Framework is not needed at the top of the door. The lower end of this piece should be bevelled to a chisel-like edge, and the door should be covered with a piece of wire netting.



FIG. 8.—Chardonneret Trap. A top opening trap that gives excellent results for some birds, particularly if dripping water is used as bait. Note the trigger sticks engaged with the doors and the central vertical rod. Also the springs pressing against the doors from the rear.

The doors are attached by small hinges to a central wooden piece that projects over both compartments to the inner edge of the openings. A light metal rod or piece of heavy wire to engage with the trigger sticks should extend through the centre of the trap from top to bottom beside the partition. As this rod is on one side of the partition it will be necessary to cut a small hole in the netting so that both trigger sticks can engage with it.

The trigger sticks are readily whittled out of pieces of soft wood about $\frac{1}{2}$ -inch thick and 10 inches long (for a trap with 12-inch chambers). One end should be notched to engage with the central vertical rod, and the other should be paddle-shaped and slightly hollowed to form a little cup in which bait can be placed. Also, a notch is cut in each trigger stick to engage with the chisel-ends of the middle pieces of the doors.

Motive power may be supplied from a piece of whalebone, from a light piece of steel (such as an old hack-saw blade), or from elastic bands. If whalebone or steel springs are used, they should be fastened only to the centre piece of the trap to which the doors are hinged, the other ends being free to move against the middle parts of the doors, where they are guided and kept in place by square wire staples.

In operation, the doors are raised to a vertical position and the trigger sticks put in place, their notched ends against the vertical wire and the other notches engaging with the middle door pieces. The pressure exerted by the springs tending to close the doors is transmitted against the trigger sticks and the vertical rod, which thus holds the doors open, although the weight of the lightest bird in dropping on to the trigger sticks will be sufficient to dislodge them and cause the doors to close. Seed bait may be supplied on the trigger sticks, but greater success has attended the use of pans of water, *particularly if the water is kept alive* by constant dripping from a receptacle suspended over the trap.

A trap that embodies several desirable features is found in the so-called "House Trap," which was developed by the writer. Its large size limits its use to trapping stations where traps can be given a more or less permanent location, but, in such places, a greater variety of birds can be taken.

The cage (fig. 9) should measure about 5 feet square and 6 feet high and consist of a framework made of 2 by 2-inch lumber covered with $\frac{3}{4}$ -inch-mesh poultry netting⁽¹⁾. In one corner is built a vestibule 18 inches wide and extending into the trap chamber about 2 feet. The 2-foot partition should also be covered with wire netting. A single door, opening into the vestibule is hinged at the corner post, while double doors open from the vestibule into the trap chamber.

(1) Occasionally difficulty is experienced in obtaining poultry netting with a $\frac{3}{4}$ -inch mesh. One-inch mesh can be used, but as many small species have no difficulty in passing through it, netting with smaller mesh is preferable.

All doors should have only the tops and hinged sides of wood, the inner edges and bottoms being formed by pieces of heavy wire (or $\frac{1}{4}$ -inch iron rods), which serve merely to stiffen the wire netting. This provides a minimum of visual obstruction to birds that may be entering. It is advisable to eliminate any threshold or crosspiece under the doors, as experience has demonstrated that birds dislike to cross such obstructions, even though they may be level with the ground.

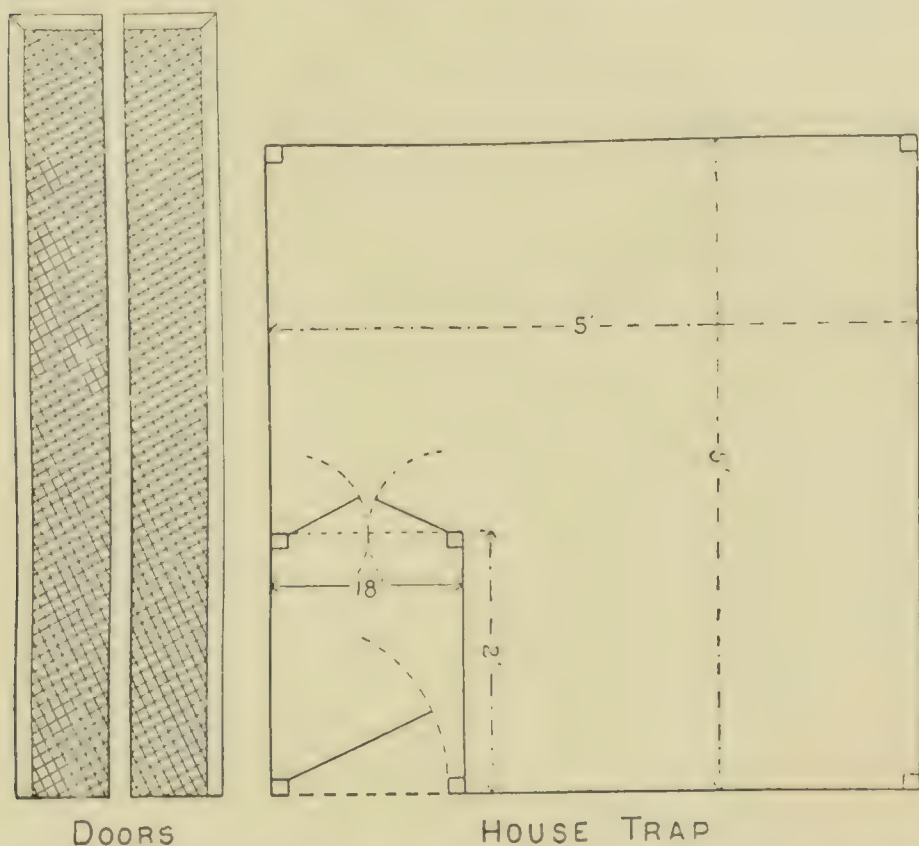


FIG. 9.—House Trap. A large trap for semi-permanent location. Note that the door frames are of wood only at the top and back.

The operation of this trap is simple. A trail of bait is laid from the outside through the vestibule into the trap chamber. The doors are left slightly ajar, the inner ones making an effective funnel. Securing birds that have entered the trap chamber may be accomplished by gently forcing them into a corner, where a small door may open into a gathering cage on the outside, or by the use of a small hoop net.

Traps that employ cord or twine nets are so well known in Europe that it would be unnecessary to describe them in

this paper. Suffice to say that "half-over" and "clap-nets" have not been used in connection with the bird-banding work in North America. One or two co-operators have experimented with them, but report that ordinarily they do better with cage traps.

The spring-pole trap, however, has a rather wide range of usefulness, particularly since it can be made large enough to throw a net 40 to 50 feet square. A trap of that size, while excellent for certain species of ducks, is so powerful that the ever-present danger to the operator justifies its use only for exceptional work. Traps throwing nets 10 to 20 feet square are more generally used and are excellent for capturing small birds that feed in close flocks. The one here described and figured (fig. 10) was constructed by the writer to throw a 20-foot net and was used to capture Mourning Doves (*Zenaidura macroura*) over a baited field.

Two straight poles or saplings, about 40 feet in length and 5 or 6 inches in diameter across the butts, are set firmly in the ground about 60 feet apart. These are the spring poles, and their tips should be elevated 3 or 4 feet by resting the poles about midway of their length on forked posts set firmly in the ground. These posts should be stout and deeply anchored, as they will act as fulcrums when the poles are bent in setting the trap. The tips of the spring poles are connected by a piece of heavy iron wire called the "throw wire," midway of which one side of the net is attached. Galvanized wire of about No. 10 or 12 gauge is best for the throw wire.

The ground to be covered by the net should be thoroughly cleaned of all rocks, roots, or other obstructions that might catch and tear the net. With one side attached to the throw wire, the net should be spread out and the opposite side secured to the ground by weaving a light rod through the meshes and driving over it several forked stakes.

The next step is to install the two triggers. Trigger boards about 3 feet long and 5 or 6 inches wide are supplied with small "stop" blocks at one end and projecting cleats or "catch" blocks at the other. The trigger poles should be long enough to extend from the stop blocks to an inch or two beyond the catch blocks. Broomsticks are excellent for this purpose, as the rounded ends are just right to rest against the stop blocks. About 3 or 4 inches from the other ends are cut deep notches, which will hold the throw wire when the trap is set. The back part of the trigger boards

should be elevated about 6 inches and staked firmly to the ground about a foot beyond the sides of the net and 8 or 10 inches in front of the line where it is fastened down. It is important that the catch blocks on the trigger boards both open in the same direction, which will be toward the point

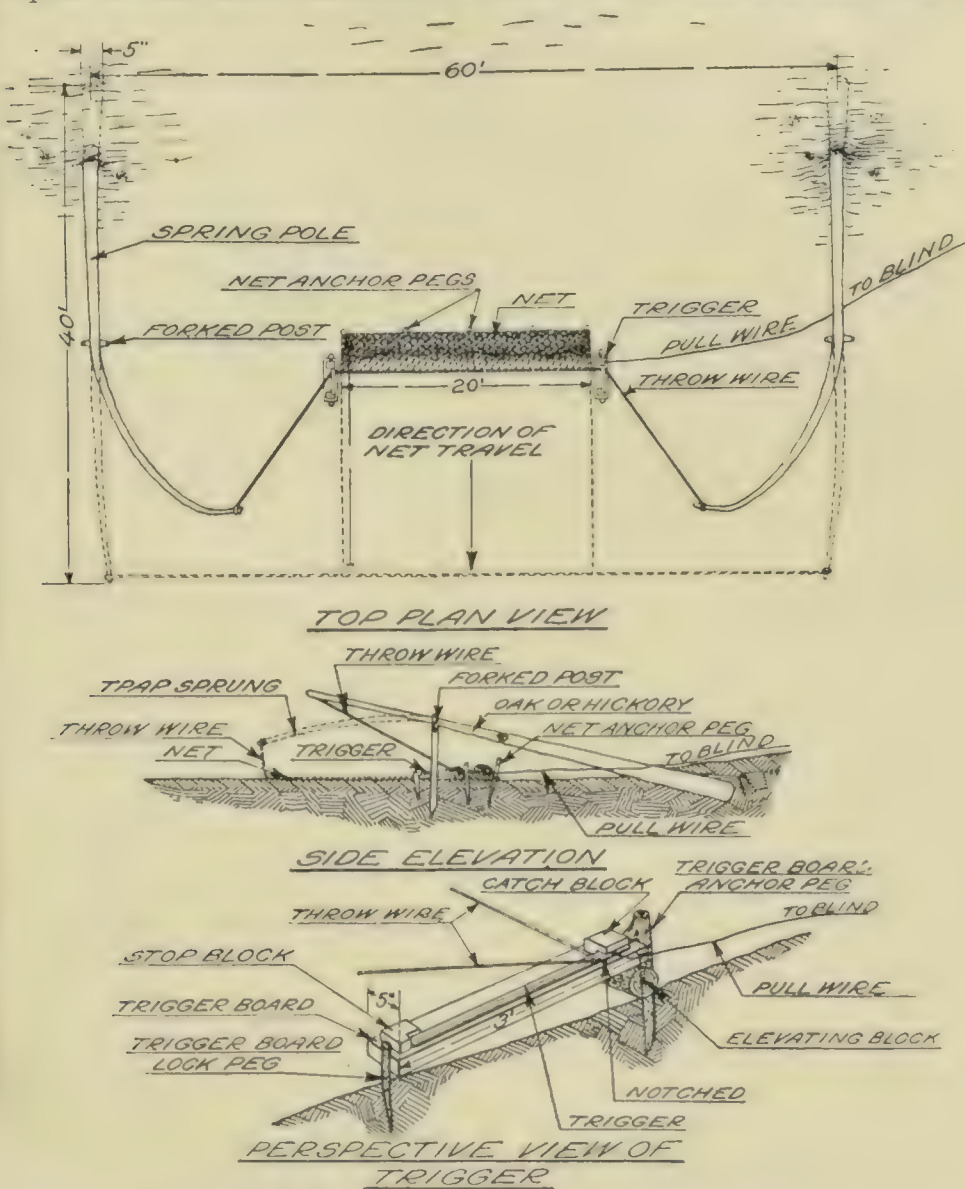


FIG. 10.—Spring-pole Trap. A good trap for special work as it can be built to throw nets 20 to 40 feet square. Smaller sizes also may be used to advantage.

of concealment of the operator. A piece of wire (the trigger wire) should be attached above the notch on the trigger pole that will be nearest the operator. This wire is, of course, carried to the blind.

In setting the trap the throw wire is pulled back and engaged with the notch in one trigger pole, which is then forced in place on the trigger board, *where it is tied fast* with a piece of cord or wire. This is done as a matter of safety until the other trigger is set and the tension equalized on the spring poles. When the throw wire has been similarly pulled back and set at the opposite trigger, the pull of the spring poles may be adjusted by sliding the throw wire in either direction until the trigger poles show no tendency to slip from under the catch blocks, thus indicating that the tension has been equalized. The net should then be pulled back and arranged in a long pile behind the wire, care being taken to see that no part of it is caught on the stationary parts of the trap. The bait should be more or less concentrated within a few feet of the net and scattered more thinly farther out.

The safety cord may now be removed from number one trigger and the trap is ready for operation. A sharp jerk on the trigger wire will pull both trigger poles from under the catch blocks and allow the spring poles to act. The poles, freed from the catch blocks, will rise vertically against the stop blocks, the throw wire will slip out of the notches and leap forward, carrying the net with it. With powerful poles this action is very fast and birds feeding in front of the net have no time to escape.⁽¹⁾

The trapping of shoal-water ducks can be done extensively with a moderate outlay in the way of equipment. A trap, known as the "water-lily leaf" or "heart-shaped" trap, and developed by the writer, is simple to construct and usually efficient (fig. 11). It is made from common 2-inch-mesh poultry wire netting. A good size for such a trap is about 5 feet in diameter, so that a piece of netting, 18 or 19

⁽¹⁾Asked regarding trapping of shore birds, Mr. Lincoln writes as follows:—"Such experimental work as has been done has shown that these birds are extremely reluctant to enter any form of a cage trap or, as a matter of fact, to go under any form of obstruction. This practically precludes the use of an automatic trap. Three or four years ago I did some experimental work with these birds and developed a trap that threw a net over a quarter circle area. There was no difficulty about catching birds with this trap but its operation was not entirely satisfactory. I am, however, convinced that the spring pole trap described in my manuscript will be found entirely satisfactory for this work. A trap of this type designed to throw a 20 foot net can be readily set on a beach where, by the use of decoys and the proper call, I am sure that Sandpipers and others of this family can be readily taken. In this connection, I might also suggest that one or two of our co-operators have obtained these birds for banding purposes by the use of flashlights."

feet in length, will make the circuit allowing enough for the funnel entrance. Two short pieces are usually required to complete the trap covering.

After a favourable site for the trap is selected, nine green saplings of poplar or willow, 10 or 12 feet in length, are cut and set firmly in the mud, forming an outline that is roughly similar to that of a water-lily leaf or a deeply indented heart. The area inclosed should be about 5 feet across with the indentation or entrance toward the open water. At points

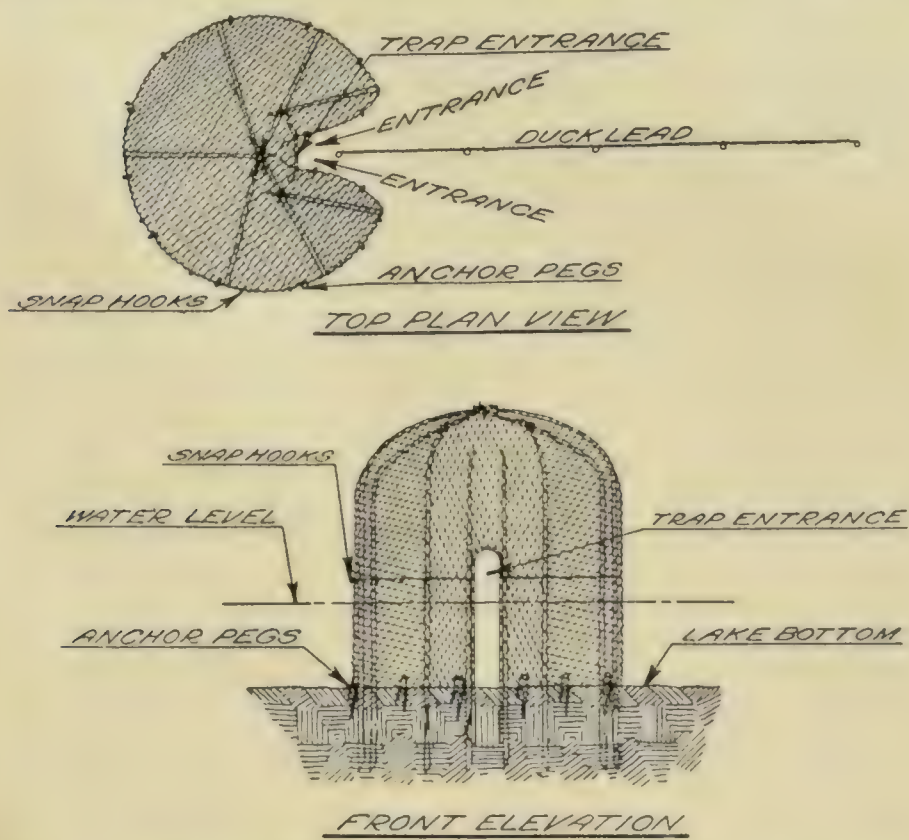


FIG. 11.—Water-lily-leaf Trap. By using an "apron" on the inside of the walls, the anchor pegs will not be needed. An excellent trap for shoal-water ducks.

about 4 feet above the water (it is generally well to set this trap in water 10 to 20 inches deep) the saplings are bent in sharply toward the centre and their ends firmly wired or tied together. This forms the framework, which is somewhat similar to that of the huts used by some aboriginal tribes. The two saplings that form the funnel or indentation should be about 18 inches apart and about 2 feet in from the

perimeter of the trap chamber. Beginning at one of these poles, the base section of wire netting is carried around the circuit on the inside of the poles. Both ends should be left long enough to continue beyond the funnel poles, to about the centre of the chamber, at which point they should be not more than 4 or 5 inches apart.

Recent experimental work has demonstrated that in placing this lower course of netting it is advisable to allow the lower edge to extend out on to the floor for a distance of one to two feet. This "apron" can be trodden into the mud and will not need the anchor pegs shown in the drawing. It will prevent captured ducks from diving under the side walls and escaping. A trap full of ducks will soon churn out the light surface mud and, unless this apron is provided, openings may develop under the sides large enough to permit many birds to escape. The netting should be attached to the framework with either copper or iron wire.

The two ends of the netting forming the entrance may be wired together to within about a foot of the water, this lower section being held open by weaving through the netting an inverted U-shaped piece of heavy wire, the ends of which are forced into the mud.

Provision for the entrance of the operator may be made on one side between the lower course of netting and one of those covering the top. Small snaps such as are used on pony harness may be used to hold the netting together at that point, which otherwise is securely laced together. It is advisable when entering the trap to remove captured ducks for the operator to wear oilskins or rubber clothing, unless he is prepared to stand a thorough wetting.

A "lead" or fence of wire netting for guiding the feeding birds toward the entrance should extend from the centre of the funnel out into the open water in front of the trap. The single lead is fully as effective as widely diverging wings. Captured ducks will gather in the pockets on either side of the funnel and rarely if ever find their way out by accidentally locating the opening.

When conditions are right, this trap can be built with a somewhat elongated chamber, the rear part of which may be on dry land, thus facilitating the removal of captured birds, but the funnel should always be in the water.

NEST-BUILDING BY MALE LESSER WHITETHROAT.

BY

H. E. FORREST, F.L.S.

AMONGST a number of notes sent to me by the Rev. E. Lorimer Thomas, of Towyn Vicarage, near Abergele, N. Wales, are certain observations on the Lesser Whitethroat (*Sylvia c. curruca*) which are of more than local interest. He has kindly given permission to publish them in *British Birds*.

In 1927 he first noted the species at Abergele on May 3rd, when he saw three male birds and heard them singing. There was a marked increase in the numbers above those present locally in former years, and I have other evidence to show that the Lesser Whitethroat is increasing and extending its range westwards in North Wales.

Mr. Thomas had three nests under observation and found several others. One nest contained six eggs on May 16th; another five eggs May 24th; another four eggs June 4th. This last nest was in his own garden, and was found on May 8th. It must have been built by the male, as no female was seen nor "ticking" heard till May 27th. Up to that date the male had been singing noisily and persistently, but thenceforth it sang very seldom. On May 28th the female was sitting on the nest at 9 a.m. and the male singing hard by. This nest was lined with black horsehair on the 28th, and the first egg laid May 31st.

Three other unlined (cock?) nests were found. One in the first week of May, the others on June 13th; all within a circle of forty yards. The spot was visited frequently, and the male heard singing noisily all May and half of June. No female was seen and no "ticking" alarm-note heard near these nests. On June 20th the male was flushed off the last-made and best-finished nest and sang immediately overhead. On June 23rd a female was flushed off this nest, which now contained three eggs. The lining to this nest, and a little wool round the edge, had been added since the arrival of the female.

These two cases seem to prove that:—

- (1) These male Lesser Whitethroats appropriated territory and built nests long before the arrival of a mate.
- (2) They stayed on singing until the mate arrived.
- (3) The female put the finishing touches to the nest.
- (4) After pairing the male sang very little.

When I first read these observations I was struck with the strong confirmation they afford to the theory advanced by Mr. Elliot Howard in his book *Territory in Bird-Life*. Mr. Thomas had not seen this book, so I lent him my copy to read.

When returning it he remarks:—"It bears out my experience with the Lesser Whitethroats, but the author never refers to the fact of the male building a nest, or nests, to be occupied if and when a female comes along. A Pied Flycatcher built a nest in a wall last year, but no female turned up, and he left the district, or at any rate was no more seen or heard, after about a fortnight's stay and song."

Although the incident is of rather a different character I may add that the male Swallow also builds incomplete nests. For several years a pair of Swallows nested inside my stable. The first year the pair took up quarters here, while the female was incubating, the male amused himself by building a series of crescent-shaped ledges of mud, hay, and feathers, along the upper side of the rafter on which the nest was placed. These varied in completeness, one being almost half the size of the nest. When the young Swallows were fledged, they used to roost on these "half-nests" all in a row.

NOTES

THE 1927 IRRUPTION OF THE CROSSBILL*.

SCOTLAND.

CANNA (INNER HEBRIDES).—About September 24th, Major M. Portal reports, two cocks (one dead) and a hen were seen.

AYRSHIRE.—On July 18th and 20th Mr. E. Richmond Paton saw single birds at Hareshawmuir, on the 23rd three or four about a mile away, on the 26th twelve to twenty about two miles away and between the 27th and August 22nd single birds. All seen were immature.

DUMBARTONSHIRE.—Writing in the *Glasgow Herald* (September 22nd), Mr. G. M. Christie states that the influx in Dumbartonshire has been "a remarkable spectacle and has continued without intermission since early August," and considers that the numbers passing through have run into thousands in flocks of ten to twenty and even fifty.

ENGLAND AND WALES.

YORKSHIRE.—On September 3rd, Mr. W. J. Clarke informs me, an adult male was picked up dead near Scarborough and brought to him.

LANCASHIRE.—On September 3rd, Mr. F. Allen states (*Nat.*, 1927, p. 299), the Crossbills were still present near Oldham (*cf. antea*, p. 123).

CHESHIRE.—On July 20th, Mr. A. C. Fraser informs me, a flock was observed in Burton Woods in the Wirral Peninsula. Between August 3rd and 17th a young bird visited Mr. J. Moore's garden at Hartford on many occasions.

ANGLESEY.—The entry for Menai Bridge under Carnarvonshire (*antea*, p. 91) should have been under Anglesey, and Mr. W. Aspden informs me that he saw a pair here last winter and a party of five or six at the same place at the end of September, 1927, from which he supposes they may have bred.

SHROPSHIRE.—From August 22nd to 24th Miss J. M. Fraser observed a flock of over twenty, including at least three old males, feeding on larch seeds, at Church Stretton.

WARWICKSHIRE.—On August 1st Mr. T. D. Wood saw about twenty at Bournville.

WORCESTERSHIRE.—On August 5th Mr. T. D. Wood saw a flock of twenty to thirty near Rednal, and thinks these

*For previous notes see *antea*, pp. 90-93 and 121-127.

were the same as reported by Mr. St. George Betts (*antea*, p. 91). Mr. Wood saw none on the 14th, but there were six on the 19th, and again none on the 20th and 23rd. No adult males were seen.

DEVONSHIRE.—On August 11th Mr. Owen Wynne and his son saw from five to seven on the West Dart about the middle of Dartmoor. They stayed for ten days and were feeding on the plume thistle. No adult males were seen.

DORSETSHIRE.—In July and August flocks from four to twenty were reported to Mr. Ashford from Westmoors and Ferndown districts, and the roadside in places was strewn with "worked" cones. During most of July and August parties up to twenty in number were seen near Blandford. On July 17th Mr. Ashford saw seven near Wareham and on September 4th four near Poole. The same observer remarks that of the scores he has observed, none has been in red plumage.

HAMPSHIRE.—At the end of July and again on October 3rd Mr. J. Moore saw small parties at Bournemouth, and Mr. W. J. Ashford states that they have been much in evidence in the Westbourne district from July 9th to September 18th.

Mr. M. C. W. Dilke, who reported Crossbills from Fawley (*antea*, p. 92) in August, states (September 29th) that the birds still visit his aviary but in less numbers. As the parties vary both in numbers and individuals (differing in plumage) and do not stay more than a few hours they appear to be migrating, but perhaps only locally. They feed chiefly on Scots pine but occasionally on seed-heads of knapweed which are wrenched off and carried to a branch or hard path.

SUSSEX.—On July 30th Mr. R. Morris saw one flying N.W. at Willingdon, and the following on the downs at Eastbourne :—August 16th, twelve to fourteen flying S.W. ; 17th, three on a beech tree ; 18th, six flying W. ; 23rd, six flying N.W. ; September 14th, six came in from eastward and stopped a few minutes in an ash tree and then settled down to feed on knapweed. No adult male was seen.

SURREY.—From some time in May to the third week in August, Prof. J. S. Huxley found them frequent in bands of three to five to twelve to fifteen in the area between Godalming, Farnham, Hogsback and Hindhead. Between September 21st and 26th, after an absence of four weeks,

he saw only one bird. From the beginning of August to the 21st Miss M. Maw saw flocks of from twelve to twenty (a few red males) at Leatherhead.

KENT.—On July 27th and remaining several weeks, a flock of five is reported by the Rev. J. R. Hale from near Maidstone.

NORFOLK.—In July, Dr. B. B. Riviere reports, two came on board the Lynn Well Light-Vessel and would not leave, remaining a week until they died. This vessel is in sight of land. At the end of September, several hundreds were reported to Major M. Portal by Mr. D. Carruthers.

IRELAND.

MONAGHAN.—Mr. H. McWilliam saw three at Milltown on July 17th and two more on the 19th, and again on the 20th, after which they left. They were observed to be feeding on "grubs" taken from malformations on shoots of fir trees (*cf. antea*, p. 93).

CHAFFINCH USING SAME NEST TWICE.

In my wood at South Wootton, Norfolk, in 1927, a Chaffinch (*Fringilla c. calcebs*) hatched off two broods in the same nest. Ten days after the first brood had left the nest the hen bird was sitting on four eggs. These hatched off safely and the young were nearly ready to fly, when both the old birds were killed by a Sparrow-Hawk and the young died of starvation.

N. TRACY.

NESTING-DATE OF CORN-BUNTING.

With reference to Mr. Stanford's remarks (*antea*, p. 74), my experience with the Corn-Bunting (*Emberiza c. calandra*) here in Lincolnshire is that the last week of June is the best time to look for a full clutch, though a few pairs nest considerably earlier. I have the following dates of full clutches: June 23rd, 25th (twice), 30th; July 2nd, 13th, 15th and 20th. On the other hand, on June 23rd, 1920, I found five nearly fledged young, and on the same date in 1922 I found a nest with one young one and one egg, but these cases seem to be very unusual. I have failed to prove that Corn-Buntings nest twice, except when the first nest is destroyed, which is most usual, as most of the early nests are in clover or mowing-grass. I feel sure on this account that eggs might be found here in August, but I have never troubled to look for them then.

JOHN S. REEVE.

WHITE WAGTAIL BREEDING IN CARNARVONSHIRE.

MR. G. A. HUTCHINSON tells me that in May, 1926, a pair of White Wagtails (*Motacilla a. alba*) nested on Penrhyn Farm, at the back of the Little Orme's Head, Llandudno. As it was near his house he was able to keep them under observation, and watch them through glasses. Both birds had the pearl-grey backs characteristic of this species. They hatched four eggs, but three of the young disappeared, probably taken by some predatory animal. The fourth reached the pen-feather stage, when it also vanished. The place was close to the old river-bed of the River Conway, known as Afon Ganol, and is on the main migration route described in my *Vert. Fauna N. Wales*. The White Wagtail travels this route in large numbers every spring, but this is the first actual record of its nesting here. H. E. FORREST.

GREY WAGTAIL BREEDING IN WARWICKSHIRE.

ON May 23rd, 1927, a Grey Wagtail (*Motacilla c. cinerea*) was put off a clutch of five eggs near Warwick. The nest was in a tuft of herbage over an artificial waterfall. Four young birds were ringed on June 5th, the fifth egg being addled, and on June 11th the young were being fed close to the nest. P. K. CHANCE.

AN UNLINED WREN'S NEST WITH EGGS.

ON May 3rd, 1927, while out in a desolate valley in one of the wildest parts of Exmoor, Somerset, I flushed a Wren (*Troglodytes t. troglodytes*) from a nest in an overhung bank near a stream, at a spot not less than 1,200 ft. above sea-level. This nest was entirely composed of moss, and on examination proved to be without the usual lining of feathers—the six eggs which it contained being laid on the interior lining of moss. I have never before seen a Wren's nest being used without the lining of feathers. The spot where I found the nest was quite a mile away from the nearest human habitations, and feathers would naturally be most difficult to obtain in such a desolate place. C. J. PRING.

SWALLOWS AND MARTINS IN PERTHSHIRE, 1927.

THE behaviour of Swallows (*Hirundo r. rustica*) and House-Martins (*Delichon u. urbica*) has been peculiar this year. Both species appeared about April 22nd, but a cold snap sent them off again, to reappear in small numbers about the first week in May. Throughout the summer both showed

a strange lack of enthusiasm in breeding ; many Swallows and most Martins had only one brood ; some of the latter did not lay until the end of June.

At Logiealmond Lodge, 1,000 feet above sea-level, the Martin colony in 1925 was fourteen nests, more or less the usual ; in 1926 there were only eight nests ; this year but three pairs appeared (May 3rd). They were very leisurely about nesting, reared one brood each (only 4, 3, 3), which were ringed on July 1st, and left, without attempting a second brood, as soon as the young ones could fly. Usually there are young in the nests till late August. All over broods were small, although the Swallows were distinctly less bad than the Martins.

	Nests Containing					Total exam- ined	Aver- age Brood	Per cent. of full Broods
	Over 5	5	4	3	2			
Swallow ...	0	5	6	3	1	15	4	33.3
House-Martin	0	1	2	9	1	13	3.2	7.7

The most probable reason would seem a shortage of insect life, caused by the bitter weather in the spring and early summer ; possibly a good many adults died of starvation on the northward migration. I should like to hear reports from other districts.

SCONE.

GREAT SPOTTED WOODPECKERS AND FIR CONES.

With reference to my former notes on this subject (Vols. XVII., p. 276 ; XVIII., p. 111), the Great Spotted Woodpeckers (*Dryobates major anglicus*) started working the green cones at South Wootton about the end of August and have been very busy with them ever since. On looking through Jardine's *British Birds* (Ed. 1839) I found under the heading of this species : " We were informed by a gentleman, long resident in Russia, that the cones of the pines were opened for the seeds, and for this purpose they were carried by the bird to some particular spot and placed in the cleft of a tree, to be held forth for dissection ; that piles of the cones, after being opened, might be seen in various parts of the forests at the roots of trees and that near his own garden was a favourite spot where the birds were often observed at work."

N. TRACY.

CUCKOO CAUSING DESERTION OF NEST.

ON May 12th, 1927, whilst sitting in my garden at Dowles, Worcestershire, my attention was attracted by hearing a Redstart (*Phœnicurus ph. phœnicurus*) in evident distress. The cause of it I discovered was that a female Cuckoo (*Cuculus c. canorus*) was evidently bent on locating the nest of the former bird, and which I watched it eventually do. It was situated in a short hole in the ground in an escarpment of a plantation at the back of my house and was previously unknown to me.

After the departure of the Cuckoo I visited the nest to make sure no egg had been deposited at that time, and found the nest as then but incompletely lined.

At a subsequent visit the nest was still in that state and deserted. This, I have little doubt, was caused by the unwanted attentions of the Cuckoo, which may possibly be the reason for the Redstart being so rarely selected as a fosterer.

J. S. ELLIOTT.

REJECTION OF CUCKOO'S EGG BY
YELLOW BUNTING.

WITH reference to the notes on this subject (*antea*, p. 94), a few years ago I found the nest of a Yellow Bunting (*Emberiza c. citrinella*) in a whin bush on Baildon Moor, Yorkshire, and underneath the nest on the ground was a broken Cuckoo's egg which I surmised had been ejected from the nest by the fosterer.

E. P. BUTTERFIELD.

SHAG INLAND IN SURREY.

ON the morning of August 29th, 1927, a young Shag (*Phalacrocorax a. aristotelis*) appeared on the terrace of my house at Worplesdon Hill, near Woking, Surrey. The terrace is about twelve feet wide, covered with gravel. Next to the terrace wall, and about four feet lower, is a bed of flowers and beyond that at the same level a smooth turf lawn. The morning was sunny, almost windless, and the third fair day in succession, so there was no suggestion that the bird was storm driven unless it had been away from the coast for several days. It was misty at the time and there had been a heavy dew. I can account for a Shag's presence at this particular spot only by surmising that through the mist the dewy lawn looked like water from the air and the terrace beside it, perhaps, like a pier or a sea wall.

The bird was uninjured and decidedly curious as to its new surroundings. When first seen by the housemaid it was

tapping on a glass door with its bill. It ate pieces of raw fish greedily when they were thrown within a couple of feet of it, but they had to be almost within reach; the bird would not move to get them. It would allow us to approach within about twelve feet, and once my wife with a piece of fish in her extended hand got much closer. If we drew near, the bird would waddle away when possible, but when cornered against



the house, it stretched its head forward and held its bill open threateningly. Usually this took place in silence, but once two or three low, hoarse notes were uttered.

We caught the bird without difficulty and set it free again on the Basingstoke Canal where it dived at once. On coming to the surface it dived again and a minute or two later found its way into an opening at the water level in a bridge abutment.

T. H. MCKITTRICK, JR.

WADERS AND BLACK TERNS AT MANCHESTER SEWAGE FARM.

EARLY in September, 1927, I paid frequent visits to the sewage farm at Clifton Junction, near Manchester, and found there the following birds :—a Green Sandpiper (*Tringa ochropus*) and a Sheld-Duck (*Tadorna tadorna*) on the 3rd, three Curlew-Sandpipers (*Calidris testacea*) on the 5th, twenty-one Bar-tailed Godwits (*Limosa lapponica*) on the 7th, three Black Terns (*Chlidonias niger*) on the 9th and 10th and a single one on the 14th and 16th, and a Knot (*C. canutus*) on the 14th.

Ruffs (*Pavoncella pugnax*) and Greenshanks (*T. nebularia*) which visit the farm with tolerable frequency have this season failed to appear ; none was present, at all events, on the occasions when I visited it. In former years, however, I have seen them often, usually during the months of August and September—at times as many as four at once of the latter. Considering the haunt is only about five miles from the centre of the city the above occurrences are, perhaps, worthy of record.

IRVINE WHITTAKER.

GREAT SNIPE IN LANARKSHIRE AND FORFARSHIRE.

A GREAT Snipe (*Capella media*) was shot at Douglas Castle, Lanarkshire, on or about August 12th, 1927. Another was seen, but missed, at Hallyburton, Forfarshire, on September 8th, 1927.

SCONE.

BLACK TERNS IN SHROPSHIRE.

DURING the first week of September, 1927, six Black Terns (*Chlidonias n. niger*) were hawking for flies, etc., over the mere at Ellesmere. They were seen several days by Mr. Brownlow Tower, who resides there. It is just twenty years since they last visited these waters.

H. E. FORREST.

SANDWICH TERNS AND FULMAR IN THE ISLE OF MAN.

SEVERAL times during the first week of September, 1927, I was on the coast, west of the Point of Ayre in the Isle of Man, with my friend, Mr. F. Brownsword, and on each occasion we saw a good many Sandwich Terns (*Sterna s. sandvicensis*) fishing close inshore. It was easy to pick the birds out from among the medium-sized Terns—Common or Arctic—by their note, a loud strident *kirr-whit*, when they were too far off to make out their larger size, black bills, short tails and whiter bodies.

Amongst the litter at high-water mark we found the dead body of a Fulmar Petrel (*Fulmarus g. glacialis*).

Mr. P. G. Ralfe tells me that hitherto satisfactory evidence of the occurrence of the Sandwich Tern in Man has been wanting, and that he has no knowledge of the Fulmar on the Manx coast.

CHAS. OLDHAM.

LITTLE GULL IN PEMBROKESHIRE AND ISLE OF MAN.

ON September 12th, 1927, my wife and I watched an immature Little Gull (*Larus minutus*) in Whitesand Bay, St. David's, Pembrokeshire. It was feeding alongside a young Black-headed Gull on the tide-line and, though a great distance away when we first saw it, the small size was very noticeable. We followed it and, as it seemed tired and frequently rested on the sand, were able to approach near enough to see its black bill, reddish (not red) legs, and the mottled coverts, which seemed, when it was at rest, to be almost regularly barred with blackish brown and grey or buff. On the wing the dark streak seemed to be continuous across the back.

Col. H. W. Madoc tells me that he saw a mature Little Gull in Douglas Bay on September 19th.

T. A. COWARD.

ABNORMALLY COLOURED LESSER BLACK-BACKED GULL.

WHEN between Scalloway and Stromness on August 11th, 1927, I noticed, amongst the Gulls following the ship, an adult Lesser Black-back (*Larus f. affinis*) with a large white patch on the upper side of each wing. This bird was flying for an hour or more within a few yards of the deck, and I was able to watch it closely through my glasses. On the right wing the patch was circular and about three inches in diameter, on the left it was oblong and about the same size, both patches being towards the tip of the wing, and near its outer edge. Otherwise the bird was a normal adult.

CHARLES E. ALFORD.

BLACK-WINGED PRATINCOLE IN FAIR ISLE.—Surgeon Rear-Admiral J. H. Stenhouse states (*Scot. Nat.*, 1927, p. III) that a female example of *Glareola nordmanni* was observed in Fair Isle on May 18th, 1927, and on the following day was secured by a boy.

The bird was in very poor condition and its stomach and gullet were crammed with flies (many still alive) of the genus *Fucellia*. This is the first record of the bird for Scotland and the ninth for Great Britain.

GREATER AND LESSER YELLOWSHANKS IN THE SCILLY ISLES.—Major A. A. Dorrien-Smith states in a letter to Dr. P. R. Lowe (*Ibis*, 1927, p. 781) that a *Tringa melanoleuca* appeared at Tresco on August 28th, 1927, and was very tame and fed quite close to him. It was still there at the time of writing on September 3rd. Major Dorrien-Smith shot the first recorded British specimen at the same place in September, 1906.

Major Dorrien-Smith also mentions (p. 782) that an example of the smaller species (*Tringa flavipes*) was present on this island from August 19th to September 17th, 1921. This occurrence has not been hitherto published, so far as we know, the only previous record for the Scilly Isles of this species being one at Tresco on September 2nd, 1920.

LETTER.

AN INLAND MIGRATION OF GREY GEESE.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. R. W. Brown's article in your issue of May, 1927 (Vol. XX., p. 286) raises the question as to whether the grey Geese frequenting the Solway Firth migrate from there to Yorkshire or *vice versa*. The grey Geese of the Humber consist mainly of the Pink-footed (*Anser brachyrhynchus*). We generally have a few Bean-Geese (*A. fabalis*) during the winter months, but the number is negligible. The old shooting men of the Spurn area say that the Brent Goose (*Branta bernicla*) was formerly seen every winter in considerable numbers but is now seen only in small numbers in the Humber Estuary. The White-fronted Goose (*A. albifrons*) is also an occasional visitor. The Pink-footed Geese usually make their appearance here during the third and fourth week of September. Small pioneer flocks are often seen during the first week of September. In 1917 a few arrived at the end of July. This year the first flock was seen on August 17th. By September 24th, all have arrived and the numbers run into thousands. It is difficult to give any exact calculation but it cannot be far from 4,000 to 5,000 birds. The nighttime is spent on the Humber and at dawn they flight on to the Wolds, the routes taken being (1) from the lower Humber over Beverley and Hull; (2) from the middle Humber over Hessle and Ferriby; (3) from the upper Humber over Brough and North and South Cave. In the evening a return is made to the Humber, except in times of full moon when the feeding time is prolonged. On the Wolds they feed on the stubbles and clover, picking out the heart of the clover plant and fouling the land with their droppings, so much as to make it unpalatable to the sheep. This routine is followed regularly till mid-January, when the flocks begin to diminish as the Wold feeding grounds are ploughed up. Some of them then shift to the lowland between Goole, Thorne and Crowle, feeding on the springing corn and waste potatoes. Some stay on the lower Humber feeding on the saltmarshes, but by the end of February or early March even the latest stragglers have left our

district, and we should very much like to ascertain their intermediate resting grounds on the return migration. Comparing our dates with those given by Mr. R. H. Brown, it does not appear that any considerable proportion migrate from here to the Solway Marshes.

There are some interesting points in their movements, bearing on the migrating instinct, *e.g.*, in a ground fog on rising from the Humber they seem quite unable to find their way to the Wolds, even though the bewildered cackling flocks are distinctly visible from below, as they fly round for hours vainly seeking the desired direction, and this although they have been following the same route daily for months. It would appear that the sense of direction is inoperative unless aided by sight, and that landmarks play the most important part in guiding them. If caught in a fog on the evening flight home they are hopelessly lost and have been known to descend in the streets of Beverley. The local gunners claim a few each season, but except in very stormy weather the birds are too wary for them. On the Wolds the method is to construct a hide in some favourite field and wait for the birds or have them driven over from their feeding ground, when they flight to another known favourite place. Occasionally they may be surprised on the Humber when sleeping, by a boating party, but the quota falling to the gun as a rule is insignificant. The record bag as recorded in the *Shooting Times*, for February 14th, 1925, is 44 killed by Mr. Donald Clegg at Eastoft one wild stormy morning. It seems probable that the main breeding ground of the Pink-footed Goose has yet to be discovered, as the enormous numbers seen here in winter are out of all proportion to the numbers seen at any known summer resort.

E. W. WADE.

REVIEWS.

A Bird Book for the Pocket. By Edmund Sandars. (Oxford University Press.) Illustrated. 7s. 6d.

IN this little book the author gives coloured figures of all the commoner British birds, and opposite to each very brief tabulated notes on the status, breeding and other habits of the species. The birds are arranged in two groups, small and large, an unfortunate arrangement which seems to have been adopted merely to accommodate the relative size of the drawings. Mr. Sandars's notes appear to have been carefully compiled so far as we have checked them, and in these he has compressed a large amount of information into a small space. The coloured drawings, which we take it are the *raison d'être* of the book, are reproduced by a process for which great accuracy is claimed, but with this we certainly cannot agree. The figures themselves, with few exceptions, are crudely coloured and stiffly drawn. Most of them if not accurate are, however, recognizable, but those of birds difficult to identify, such as the Warblers and Pipits, are really useless. But the price of the book is small and we must not be too critical.

Report of the Oxford Ornithological Society on the Birds of Oxfordshire, Berkshire and Buckinghamshire for 1925. Edited by Rev. F. C. R. Jourdain and B. W. Tucker. The same for 1926, edited by B. W. Tucker.

THESE two Reports are full of useful notes for which future writers on the birds of these counties will be deeply grateful. The work of editing is carefully done and the notes are made as uniform as necessary

and are of a character which makes them (especially as a series year after year) of the utmost value. Positive fluctuations in the numbers of breeding birds, especially of the less common species, are noted, and the Reports contain many interesting items on unusual breeding and other habits. The occurrence of unusual or rare birds to the districts concerned is carefully recorded and we admire the caution observed when their identification is not considered certain. There are no assertions of positive identification without good evidence, the bringing forward of which is just as necessary in ornithology as it is in a Court of Law.

Among the observations here gathered together some of the more important have already appeared in our pages, but there are many others of interest such as breeding notes on Hawfinch, Cirl Bunting, Wood-Lark, Hobby, Shoveler, Pochard, Tufted Duck and Stone-Curlew, the possible breeding of Garganey (Oxon., 1925), the occurrences of Golden Oriole, Hen-Harrier, Storm-Petrel, Grey Plover, Sandwich Tern and Kittiwake, and a possible record of two Kites reported by a keeper (Berks., spring, 1926), who knew the bird on the continent.

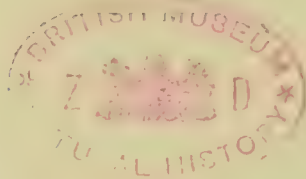
The interesting fact that the Curlew bred on Otmoor in Oxfordshire in 1925 has already been reported in our pages (Vol. XIX., p. 102), and Mr. R. J. Clough thinks there were as many as eight or ten birds there that year, but in 1926 they appear to have deserted this place. In this connection an interesting note appears on p. 16 of the 1925 Report that three pairs of Curlews were seen in that year by Messrs. J. L. Hawkins and H. P. O. Cleave, and a nest found in the Blackwater Valley in Hampshire, but very close to the Berkshire border. These, too, deserted this ground in 1926.

We congratulate the Oxford Ornithological Society on the production of these excellent Reports, which might well serve as models for local records of this character.

Report of the Marlborough College Natural History Society for 1926.

THERE are several interesting items in this Report, but insufficient detail is given. For instance, the Tufted Duck is recorded as "young flying July 17th" by Mr. S. T. C. Turner, but the observation, which is put forward as a first record of breeding in Wiltshire, is not substantiated by any evidence. The same may be said for the bare statement that the "Curlew undoubtedly nests here."

NOV 1927
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DECEMBER 1,
1927.

Vol. XXI.
No. 7.



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WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

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NOTES ON THE NESTING OF THE SAND-MARTIN.

BY

RICHMOND H. HELLYAR.

Of the three British representatives of the family of Swallows, the Sand-Martin (*Riparia r. riparia*) is generally assumed to be the most conservative in its behaviour and the least able to adapt itself to the conditions of our civilized life, or to gain advantage from the gradual growth of human influence.

It has, undoubtedly, not made itself so entirely at home, or domesticated itself amongst the actual conditions of civilization; nor has it taken such an advantage of the protection that man's presence affords, as the Swallow (*Hirundo r. rustica*) and the House-Martin (*Delichon u. urbica*) have done. But although it most commonly retains its ancestral methods of nesting in self-made burrows where those methods are practicable, and rarely goes beyond utilizing the sites that have been left available after the formation of railway cuttings and embankments—this is not, I think, owing to any inferiority in adaptive ability on the bird's part; nor is it necessarily associated with exceptional shyness or distaste for human presence.

Although the habit of utilizing holes in walls for nesting has been recorded on many occasions since the days of Gilbert White (Letter XX. to Daines Barrington: 1774), these cases of adaptiveness have, I think, hardly received the attention they deserve.

I wish here to give details of, and to discuss some points of general interest in connection with, such cases occurring in the Bristol district, where this variation in nesting behaviour appears to be displayed in an unusually generous degree.

The earliest note I can find is in the *Proceedings of the Bristol Naturalists' Society*, where Mr. J. A. Norton refers (1899) to a colony in "the retaining bank at the back of Bridge St.," facing the water. This colony, which was right in the centre of the city, no longer exists, possibly owing to increased industrialization and pollution of the stream, and hence absence of insect food. He also refers to a colony on the "right-hand side of the road by Three Lamps." There is a high wall here, which is probably the one referred to, but it is now covered by a very large advertisement hoarding—a factor which in the future may have some effect on the ecology of the Sand-Martin! Finally, he refers to "another colony nesting between the stones of a roughly built wall in Kensington Hill, Brislington." I can find no colony

here ; but it is possible that the recorder made a fairly common mistake and referred to Kensington Hill, instead of Bristol Hill.

I know of two nests in the high wall at the top of this hill, which is a very frequented main road with a double line of tramcars. About a quarter of a mile away, on the Bath Road, there is a colony nesting in the holes of a high wall facing the road. Here there bred seven pairs in 1927, most in holes about eight feet from the ground. This road is very much used, and there is a perpetual stream of vehicles and pedestrians. The birds, however, are not at all shy, but will fly into their holes in front of the passer-by's eyes.

About two miles away, at Keynsham, there is another colony, of six pairs, in a high embanking wall, facing the Station and the main road to Bitton. This wall is higher, and the birds nest well out of reach. The road is not nearly so frequented as the Bath Road at Brislington, and I have found these Keynsham birds markedly more shy.

For many years there was a colony at Stapleton, another suburb ; this was formed of two groups of birds some distance apart. This year, however, for some reason, they have not nested in the accustomed holes in one part ; but in the other—a wall nearer the river—I observed one hole occupied ; and as this was rather late in the season, probably there were others, as I saw a number of the birds flying above the river.

Finally, there is a colony in the suburb of Redland, near where I live, and to which I have paid a good deal of attention. This again is in a wall facing a rather infrequented road, and an allotment and tip beyond. The population of this has varied considerably. I am informed that twenty-five years ago it was a considerable colony. I have known it myself for eight years, and during that time it has varied from four pairs to a single pair. It has also changed its site and moved about 100 yds. up the road, and its old holes are now nearly all filled with ivy-leaved toadflax. There are, this year, five holes occupied, more than has been the case for a long time. The birds are not at all shy, and will frequently fly into their holes before the gaze of the passer-by.

In addition to these, I am informed by Mr. Coldstream Tuckett that he and Mr. R. P. Gait have observed similar examples of this nesting habit "on the main Weston Rd. from Long Ashton to Flax Bourton, also at Pensford."

There are many interesting points arising out of this variation in the nesting behaviour of the Sand-Martin—of bird

psychology, bird ecology, inheritance of acquired characters, territory, influence of environment. In this paper I can only refer briefly to certain conclusions and certain difficulties that have struck me in connection with my own observations and those of others.

First, I wish to draw attention to the environment of these Bristol birds. There is only one small outcrop of sand in this district, at Bitton; and the stiff clay that is so general in the area (whose geology is mainly limestone and heavy clays) would not be suitable for burrowing purposes. The district as a whole is indeed a most uninviting one to the Sand-Martin, particularly the immediate neighbourhood of the city, where, of course, the hand of man, by building and the like, has radically altered the face of the land, and created conditions that are only possible for nesting purposes to a small minority of birds.

It would appear, therefore, as though the Sand-Martins have utilized these artificial sites under the compelling influence of necessity. If they had not varied their behaviour in some respect they could not exist where they do. At some past date, forced by what Dr. Julian Huxley calls "biological pressure"—absence of food, over-population, lack of nesting sites, etc.—or by other reasons, from the localities in which they were born and in which they were reared, one or several pairs overflowed from an area where sites were abundant into this new area, where the nature of the rock and soil did not allow of their normal method of nesting, but where other conditions were less intense—in fact, where the protection afforded by man's presence against natural enemies was of great value in the struggle for existence. In addition to this latter, more negative, advantage of human presence there was probably another, more positive one, an increase in food resulting from man's frequently filthy habits, as evidenced in tips, for instance. These Sand-Martins were not apparently affected in this change by any shyness or avoidance of man, as Gilbert White believed.

This pair, or these pairs, of birds were faced with the fact that if they did not vary their nesting behaviour, they would not be able to breed at all. But the impulse to breed is only second in strength to the impulse of self-preservation. Under the internal stimulus of this intensely powerful impulse the birds' minds would be working at almost full pressure. The result was that they changed their behaviour to some extent and adopted a fresh habit. This variation in behaviour of

the Sand-Martin was a radical one, more radical than that of either of its relatives. I suggest that a study of it will not lead one to the conclusion that the Sand-Martin is less intelligent and less adaptive than the other Swallows. The change involved the complete omission of the whole complex series of actions that are concerned with the making of a tunnel. All this was dropped entirely; the bird cut altogether with this most important and complex part of its ancestral instinct. It still holds on to the principle of tunnel-nesting. It still, as a general rule, builds its nest well away from the mouth of the cavity, and often it penetrates far back for many feet, placing its nest in an absolutely impregnable position, frequently being able to turn a corner, or make use of a narrow neck. But it has broken the chain of instinctive actions that normally precede the actual building of the nest. In this, at any rate, it did not follow out mechanically a series of acts in which the response of the one was the stimulus to the next following. This is obviously quite a different thing from its adopting the sites provided incidentally by man in railway cuttings and the like, where the bird merely follows its usual instinctive course of behaviour and makes no real alteration in its way of life.

In thus coming into the actual daily life of men, the bird has, moreover, quite changed its environment, leaving its quiet haunts to enter an environment of noise, bustle and commotion. It has really revolutionized its mode of living.

But the problem is by no means so simple as would appear from the above. There are instances that are not so straightforward, and that cannot be explained in this way as direct adaptation to environment. Mr. P. F. Bunyard records an interesting observation (*B.B.* Vol. XVII., p. 187) illustrating this difficulty.

On May 28th, 1923, he saw "several Sand-Martins flying up and down the line" at Rye House Station, G.E.R. "Some were carrying nesting materials and I was astonished to see several of them disappear into holes in the brickwork of the sides of the platform, just over the metals. I mentioned this to the guard of the train and he informed me that they had bred there for several years . . . It is remarkable that the birds should have chosen such a precarious position, when there are plenty of gravel and sand pits quite near."

I am also informed by Mr. E. W. Beacall that "several pairs used to nest regularly in drain pipes in the bank of the Gloucester and Berkeley canal at a place near Hempstead—

these pipes were rather damp, and only about a foot above the water level." He goes on to say, "they are fairly common along the banks of the Severn a few miles below Gloucester, particularly about Stonebench, where they nest each year. From here to the canal at Hempstead is only about $2\frac{1}{2}$ miles."

I find it impossible, as the facts are at present, to understand these, more especially in the example that Mr. Bunyard gives. This side of the question requires more examples and fuller details. The only suggestion I can make is that "wall-nesters" have drifted into a district where natural sites are available, but that the new method of nesting has been retained, in spite of the presence of normally suitable sites. But this is merely tentative. If true, it would imply that the habit became fixed. But the matter requires full investigation and observations—that might finally, perhaps, shed light on some problems of general biology.

I can only refer briefly to one or two interesting points that arise out of this variation in nesting behaviour on the part of the Sand-Martin. One is the inheritance of acquired characters—in relation to the vexed question of the inheritance or non-inheritance of habit. Professor Lloyd Morgan refers to the adaptive behaviour of the House-Martin with regard to this problem in *Habit and Instinct* (London: 1896: page 286). Do the progeny of the wall-nesting Sand-Martins always afterwards nest in holes in walls; or do they abjure walls for the more primitive, burrowing, site when it is available? If the first alternative is true, do the young birds, as Prof. Lloyd Morgan suggests, nest in walls by association of ideas—by their associating the idea of holes in walls with the idea of nesting through personal experience, and tending to nest in the situations where they themselves have been reared? Or do they nest in walls by "inherited habit," transmitted from their parents?

More facts are needed before any attempt at deciding these points is possible. Exact evidence is needed, indeed, to prove whether the Sand-Martins that have nested in the same spot and fashion for over twenty years, have done so generation after generation, young following parent.

This, and other matters of interest, perhaps at present overlooked, can be solved with the help of the "British Birds" ringing scheme. The ringing of wall-nesting Sand-Martins should be particularly concentrated upon. Details of the nesting sites of marked Sand-Martins should be mentioned on the recording sheet. Recoveries should, where possible,

state whether the bird was found in a wall or in a burrow. The subsequent value of such records would be great*.

I am unable to say why this variation in the nesting behaviour of the Sand-Martin has not spread more widely than it actually has done ; or, indeed, whether it is still spreading. There are many walls available, in this district at any rate, with similar and often better holes that are not used ; and only a small number of the holes available in the actual colony are utilized. In some cases, probably, the factor of wet has been a means of restriction, although all the holes that I have inspected have been perfectly dry and unaffected even by the very wet weather of this year.

*It has been suggested that ringing these birds is not a very easy task. It is not easy, but it is quite practicable. The difficulty is that the birds usually nest out of reach, frequently around corners, and often they choose the narrowest of holes. I myself ring them at night. I find that by flashing a small lamp in the birds' eyes, I can, by "hypnotism," draw them to the mouth of the hole. The parents can be ringed at any time by this method ; the young are best captured when full fledged.

COCKS' NESTS OF THE WHITETHROAT.

BY

STANLEY LEWIS.

It is fully fifteen years ago since I began to wonder at the number of nests of Whitethroat (*Sylvia c. communis*) which I found of a certain structure that never contained eggs. I collected quite a number of these nests, all frailly built of the dead stems of *Galium*, apparently *G. aparine* (Goose-grass) and adorned more or less heavily with willow-down. The down might be matted together on the bottom or sides of the inner cup of the nest, or on the rim, or the whole nest might be flecked with it ; in addition, a petal or two of some wild flower and cocoons of spiders appear.

The main points are : that these nests never contain eggs, and never contain hair lining ; they are always much flimsier, and, despite the adornment, have a decidedly unfinished appearance when placed side by side with the comparatively firm structure of the genuine article, viz., the utilized nest. The nest proper may or may not be hair lined, but when the horsehair is absent there usually appears a very decent lining of very fine grasses, and exterior decoration is, in most cases, very limited ; exceptions I know occur.

The nest which forms the illustration of this article was photographed on June 3rd, 1927, amongst a tangled mass of flowering brambles, *Rubus suberectus* ; it is heavily adorned on the rim and part of the inner cup. By clearing away a small space I was the better able to watch, and I actually saw what I believe to be the male bird with willow-down in his beak. Eight yards from this nest, in the same flowering brambles which skirted the rough track over a heath, a Whitethroat was sitting on a nest containing five eggs.

I conclude that the Whitethroat, and probably the male, builds a plurality of nests, veritably cocks' nests ; perhaps in order to draw attention from the one in which the domestic duties are being performed. The only allusion to these unfinished nests that I know of is in the *Oologists Record* for June 1st, 1926, p. 45, where Mr. J. W. B. Griffiths states : " I have come across several unusually decorated nests belonging to the Greater Whitethroat. In most cases willow-down was used to decorate the rim of the nest, but I have never once found these decorated nests to contain eggs, although I have discovered several and watched carefully."

After the above was written, the Editors of this Journal very kindly sent me a copy of the *Irish Naturalist* for 1918,

pointing out an article therein, pp. 140-143, by Mr. J. P. Burkitt, who deals very fully with this nest-building habit of the male Greater Whitethroat, his contention being that these unfinished nests are always built by unmated "lonely males" and that a single male may build even up to four



DECORATED NEST BUILT BY COCK WHITETHROAT.

of such nests, but, when mated, the male does no building whatever. The Editors further point out that Mr. H. E. Howard recorded in his *British Warblers* that a male built two nests and commenced a third, which was completed and used by the female, and that in the *Zoologist*, 1888, p. 311, the Rev. A. Ellison stated that the male builds the nest. I am of the opinion that in certain papers where it is stated the male Whitethroat builds the nest, the observation must have originated from watching the builder at one of these cocks' nests which I have attempted to describe; but

whether the male, when mated, ceases entirely to do any nest-building, as Mr. Burkitt states, I have no proof; I can only refer to the observation set forth in my note, that a male was decorating a dummy nest only a few yards from an occupied nest containing five eggs.

My notes on the subject are entirely original, for I had not even heard of the above references until brought to my notice by the Editors of this Journal, and I offer them now as confirmation, and perhaps elucidation, of this interesting habit of the male Whitethroat.

NOTES

DESTRUCTION OF ROOKS AND JACKDAWS BY FALL OF TREE.

In a gale on the night of October 28th-29th, 1927, a large elm tree with a considerable amount of leaf still on was blown down in my rookery at Leadenham, Lincolnshire. Maimed and dead birds, as follows, were picked up and there are probably more under the mass of branches. I could see three or four.

36 old Rooks.
17 young Rooks.
10 Jackdaws.

The tree was torn up from the roots, and I can only suppose that it had been swaying in the gale some time and that the birds were afraid to leave it and hung on to the bitter end.

The large number of casualties is, however, extraordinary.
JOHN S. REEVE.

THE 1927 IRRUPTION OF THE CROSSBILL*.

SCOTLAND†.

FAIR ISLE.—Mr. G. Stout reports that in the first week of July Crossbills began to arrive, and had practically all disappeared by the end of the month. At one time at least 300 were on the island. (*Scot. Nat.*, 1927, p. 160.)

OUTER HEBRIDES.—Mr. J. Wilson Dougal states that on July 29th, during an expedition to *North Rona* (uninhabited and treeless), about thirty Crossbills were seen and noticed to be feeding on sea-pinks. About the beginning of August two lots of about thirty each were observed on *Lewis* in the only two localities where there are trees (*loc. cit.*).

CANNA.—Mr. J. K. Nash states (*op. cit.*, p. 158) that two were seen on August 31st (*cf. antea*, p. 153).

BUTE.—About September 1st some birds feeding on spruce were seen by a gamekeeper, the Rev. J. M. McWilliam informs me, and from the description these would appear to have been Crossbills.

DUMBARTONSHIRE.—On September 9th Mr. Guy Charteris

*For previous notes see *antea*, pp. 90-93, 121-127, 153-155.

†A number of interesting notes appear in the *Scottish Naturalist*, September-October issue, brief particulars of which are given here, but the original should be consulted by those interested.

saw three at the head of Loch Lomond, feeding on Scots pine, many "worked" cones of which were under the trees.

PERTHSHIRE.—On August 31st Lord Scone saw a party of about twenty at Logiealmond Lodge, and about the middle of October a dozen were seen on the outskirts of Perth.

ENGLAND AND WALES.

NORTHUMBERLAND.—On September 25th Miss B. C. Paterson first noticed a small flock at Stocksfield-on-Tyne feeding on larch cones.

ANGLESEY.—With reference to the note (*antea*, p. 153), Mr. G. R. Humphreys points out that Crossbills were reported at this place by Mr. W. J. Kemp on March 16th, 1927, and recorded in the *Report* of the Anglesey Antiq. Soc. and Field Club.

CORNWALL.—From August 3rd to 10th Mr. W. H. Thompson saw small parties (up to six) near East Looe.

DEVONSHIRE.—On November 21st Mr. V. C. Wynne-Edwards saw two at Plymouth feeding on cotoneaster berries.

SOMERSETSHIRE.—On November 20th Mr. J. H. Symes saw about twelve in orchards at Coat Martock.

DORSETSHIRE.—In October the Rev. F. C. R. Jourdain records larger numbers than for some years past on commons overgrown with pines four or five miles north of Poole and Bournemouth (*cf. ante*, p. 154). Mr. W. J. Ashford writes that Crossbills were last seen at Westbourne on October 23rd and near Blandford on the 21st.

SURREY.—On July 30th and 31st Mr. W. H. Thompson saw two small flocks at Leatherhead, and on returning after a fortnight's absence found them much more numerous, and they were plentiful up to the end of August, but by the middle of September became scarcer. On August 14th Mr. Guy Charteris saw about twenty near Lingfield. On November 14th Mr. E. R. Paton saw about thirty near Guildford feeding on larch.

KENT.—At the beginning of July Mrs. Alex. Boord reports some on the borders of Kent and Surrey. On September 18th Mr. P. D. Lomax reports (*Field*, 3, xi.'27, p. 701) two from Dover.

OXFORDSHIRE.—On October 30th Mr. E. M. Nicholson saw two near Blenheim.

BEDFORDSHIRE.—Between the middle of September and middle of October Mr. D. Seth-Smith has several times noticed twenty to thirty at the Zoological Society's Park at Winslade.

CAMBRIDGESHIRE.—On October 27th Mr. W. H. Thompson saw three flying over Cambridge, and a week previously he heard some there.

NORFOLK.—During the third week of July Mr. W. H. Thompson reports single birds in twos and threes between Cley and Blakeney Point.

IRELAND.

LEITRIM.—On July 23rd an adult female was shot at Innisfail, Drumshambo, and received by Messrs. Williams & Son for preservation.

DUBLIN.—On July 31st Mr. W. J. Williams saw eight fly over Rathgar, Dublin. Prior to that date odd birds were noticed flying over his garden.

WICKLOW.—On July 13th an immature bird, shot from a flock of six at Glendalough, was sent to Messrs. Williams & Son, Dublin, for preservation.

On September 14th a bird-catcher brought in to Messrs. Williams & Son four Crossbills caught the same day at Blessington.

WEXFORD.—On August 23rd Messrs. Williams & Son received an adult male shot near Wexford.

TAWNY PIPIT IN SUSSEX.

ON September 4th, 1927, I saw a Tawny Pipit (*Anthus campestris*) on the coast near Rye. The absence of striations on the buff breast and flanks and whitish under-parts at once attracted my attention, as did also the very clearly defined buff eye-stripe. The feathers of the upper-parts were sandy-brown with dark centres, the tail reddish-brown. I infer that the bird was in winter plumage, the moustachial streaks not being at all pronounced.

After allowing me to watch it from a distance of four or five yards, on my nearer approach the bird rose, emitting a shrill, double chirp, quite unlike the notes of any of our breeding Pipits.

Later in the day I noticed the bird on a grassy track, along which it ran with astonishing swiftness for about fifty yards before taking wing.

HOWARD BENTHAM.

PIED FLYCATCHERS IN KENT AND SUSSEX.

ON September 1st, 1927, I noticed a Pied Flycatcher (*Muscicapa h. hypoleuca*) at Littlestone, at a spot about half a mile from the sea. On the same day two birds appeared on the sand-dunes near Rye Harbour. All three were apparently immature.

HOWARD BENTHAM.

LESSER WHITETHROAT IN PEMBROKESHIRE.

ON June 4th, 1927, Mr. Charles Oldham and I saw and heard a Lesser Whitethroat (*Sylvia c. curruca*) near Tenby. On June 9th we found the bird at the same spot, singing vigorously—not only the well-known “rattle” but the full warbling song. This, I believe, is the first record of the species in the county, except for the admittedly doubtful one in M. A. Mathew’s *Birds of Pembrokeshire* (1894).

In June, 1924, we saw a Lesser Whitethroat in the extreme south of Cardiganshire, some miles from the Pembrokeshire border; and Dr. J. H. Salter informs us that further north, in the Aberystwyth district, this species has markedly increased of late years. It appears therefore to be extending its range in S.W. as well as in N.W. Wales.

BERTRAM LLOYD.

AVERAGE BROOD OF SWALLOWS AND HOUSE-MARTINS IN CUMBERLAND AND WESTMORLAND.

THESE data concerning the average brood reared by Swallows (*Hirundo r. rustica*) were obtained from pairs breeding in various localities in Cumberland and Westmorland. In each year most pairs reared two broods, whilst in 1927 one pair raised three.

	No. of Nests Examined.	Broods of					Average Brood Reared.
		6	5	4	3	2	
1927	25	—	8	12	3	2	4.0
1926	20	1	4	11	2	2	4.0
1925	16	1	4	8	3	—	4.2

The data for the House-Martin (*Delichon u. urbica*) are based on a small number of nests examined at Cumdivock, Cumberland, 300 ft. above sea-level. Most pairs reared only one brood. In 1927 nine nests held twenty-two young, average brood 2.4; in 1926 seven nests had twenty-four young, average brood 3.4.

R. H. BROWN.

ALPINE SWIFT IN WILTSHIRE.

ON October 27th, 1927, at Stapleford in the Wylve Valley, I saw an Alpine Swift (*Apus melba*). It was hawking over the river and water-meadows some twenty or thirty feet from the ground and I had it under observation for several minutes.

During that time it came directly over me, and I finally watched it out of sight down the valley. A Swift on that date would attract one's attention at once, but the conspicuously large size, the general impression of brown, not black, coloration and, when it came over me, the light, almost white, under surface, left no doubt in my mind as to this bird's identity.

N. F. TICEHURST.

ABNORMAL LAYING OF CUCKOO.

A "REED-WARBLER" Cuckoo (*C. canorus*), which returned to her old territory in Kent for the third successive season, did not during 1927 lay with the clockwork regularity of some other well-known Cuckoos, nor, in fact, as she herself did in 1925, when she laid sixteen eggs, one every other day for a month. I much doubt whether there is a record to equal hers of this year when she laid and successfully deposited three of her eggs in four days. Her fourth egg was deposited at 4.5 p.m., May 27th, her fifth before 2.0 p.m., May 29th, and her sixth at 6.0 p.m., May 30th. Her fourth and sixth eggs were actually seen deposited by the watchers, whilst the nest which contained her fifth egg was looked into as late as 8.30 p.m. on May 28th, at that time no Cuckoo's egg being in the nest. It was about this time that a second female put in an appearance upon the territory and to what extent this bird influenced the early laying of the sixth egg of the old bird I cannot say, except that it should have been deposited on May 31st. It appears certain, however, that the new arrival subsequently affected the laying of the old bird, for she did not lay again until June 11th—a longer break than in any of her previous years. During this break the new bird did a large amount of scrapping and raiding but be it noted that no nest which had received any of the six eggs laid by the Cuckoo in possession of the territory was molested by the new comer. So much for the clever police work of the old bird.

I have always maintained that provided one clear day has elapsed between a Cuckoo's layings she could lay at will, but on this occasion a Cuckoo laid on two successive days, certainly the first-known occurrence in my forty years' study of the bird. Further, the intruding Cuckoo must have affected the behaviour of the old bird, for she carried on her layings until July 12th, another record so far as my birds are concerned, the previous latest date being July 8th in 1923 for a fresh egg. The intruding Cuckoo (after depositing five eggs) was finally, on June 30th, driven off the territory

by the old bird, who was left in peace to continue her long series, ending on July 12th. Her record so far is sixteen eggs in 1925, fifteen in 1926 and sixteen during 1927.

GEO. J. SCHOLEY.

REJECTION OF CUCKOO'S EGGS BY PIED WAGTAILS.

WITH reference to the notes on this subject (*antea*, pp. 94 and 158), it may be interesting to record that in 1927 no Cuckoo appeared in the chalk quarry at Cliffe-at-Hoo, Kent, to victimize the large colony of Pied Wagtails (*Motacilla a. yarrellii*) resident there, so with a view to introducing a Cuckoo or two I removed two Cuckoo's eggs, quite fresh, from neighbouring Hedge-Sparrows' (*Prunella m. occidentalis*) nests and placed one each into two nests of Pied Wagtails containing five fresh eggs respectively.

I waited until nightfall, carefully removing a Wagtail's egg from each nest and inserting a Cuckoo's egg in their places. I left the nests and walked away a little distance and watched both Wagtails back to their nests until dark. Nothing unusual occurred, but on visiting the nests at 8 a.m. the next morning I found *both* Cuckoo's eggs missing. The nests were some fifty yards apart and both females were sitting tightly when I visited the nests that morning. Both, in fact, reared their four young.

Yet I have seen a Cuckoo remove three of the Wagtail's eggs from a nest of four, deposit her own egg, and before the Cuckoo has got out of earshot, the Wagtail has been back to the nest sitting on one of her own eggs and that of the Cuckoo, not attempting to move until I thrust my hand into the nesting hole.

GEO. J. SCHOLEY.

REJECTION OF CUCKOO'S EGG BY LINNET.

ON June 9th, 1925, in a garden near Cobham, Surrey, where two eggs of the Cuckoo (*Cuculus c. canorus*) had been found in nests of the Linnet (*Carduelis c. cannabina*) a few days before, I found a Linnet's nest containing two eggs. Two days later the nest was apparently empty, but more bulky in appearance, and I discovered under the lining or, more accurately, between the old and the new linings, a Cuckoo's egg alone.

Later I found, a few yards from the site of the Linnet's nest, a fourth egg laid by this Cuckoo which had been accepted by a Greenfinch (*Chloris ch. chloris*), so that apart from further evidence that the selected fosterer occasionally rejects

a Cuckoo's egg, evidence is afforded of a Cuckoo apparently parasitic on one or perhaps two species of Finch.

Probably it has no significance, but the Cuckoo's eggs were generously splashed with purple, these superficial markings resembling to some extent those on the eggs of Linnets and Greenfinches.

GUY CHARTERIS.

TREE-PIBIT AND CUCKOO'S EGGS.

ON June 1st, 1927, near Luss, Dumbartonshire, I found a nest of a Tree-Pipit (*Anthus trivialis*) containing a Cuckoo's egg, apparently recently broken. A few paces away I saw another Tree-Pipit's nest with a Cuckoo's egg in it. In neither nest was there a Tree-Pipit's egg. The second nest found had the appearance of being deserted, and the contents of the egg, when blown, proved to be stale. In case the nest should not be deserted I placed in it—for lack of a more convincing substitute—a Willow-Warbler's egg and to this the Pipit laid three eggs before beginning incubation. The shell of the broken Cuckoo's egg resembled closely that of the unbroken one.

These facts, I regret, prove nothing, but they may be of interest and I record them for what they may be worth.

GUY CHARTERIS.

REGULAR APPEARANCE OF HEN-HARRIER IN WIGTOWNSHIRE.

A HEN-HARRIER (*Circus cyaneus*) was seen on October 12th, 1927, in Wigtownshire on the edge of a moor. This is the fifth year in succession the bird has appeared, and on each occasion its visit has lasted two to three weeks, while its arrival has always been between October 11th and 16th.

M. PORTAL.

SPOONBILLS IN HAMPSHIRE.

ON October 7th, 1927, whilst my wife and I were walking on the cliffs to the east of Southbourne, Bournemouth, we saw two Spoonbills (*Platalea leucorodia*) flying from the direction of Christchurch Harbour. They soared in wide circles for some time when quite near us, and eventually flew off to the west, towards Poole Harbour. I watched them in bright sunlight through a Goerz 12X binocular, but even without glasses their white plumage, distinctive bill, widespread wings, slightly curved neck, and trailing black legs were plainly visible. I have seen the species previously in Norfolk.

JOHN MOORE.

SPOONBILLS, AVOCETS AND PROBABLE
DEMOISELLE CRANE IN HAMPSHIRE.

ON October 23rd, 1927, at dusk, a Crane passed over Needs Ore, Beaulieu, Hampshire, flying too high to distinguish its plumage—it was being mobbed by the whole colony of Black-backed Gulls.

On October 24th and 25th it was on the marsh in company with three Spoonbills (*Platalea leucorodia*). The Crane carried a crest, and appeared to be a Demoiselle, and may have been an escaped bird. Mr. Witt and his son both saw the four birds on Warren Farm Marsh, and noted, as I did, their efforts to mingle with the Curlew, much to the disgust and affright of the latter, which promptly left for the shore. On the 28th the Crane had left and there were four Spoonbills. On November 3rd two of them flew over my head. When feeding in a swampy place the Spoonbills' proceedings rather reminded me of the steady swing of a man mowing with a scythe. When they got their heads up their "spoon" bills were unmistakable and the mane-like crest at the back of the head showed clearly. The Crane was again seen on the marsh on November 9th with two Spoonbills.

Sir Thomas Troubridge tells me that he and Lord Montagu saw two of the Spoonbills whilst flighting a few days previously.

The only other noteworthy birds seen by me at Beaulieu this year were two Avocets (*Recurvirostra avosetta*) on the foreshore, on May 24th, 25th—27th. CECIL PADDON.

EARLY GREY GEESE IN LANCASHIRE.

GREY Geese were seen on migration in north Lancashire this year earlier than ever before. On July 15th there was a gaggle of forty odd in the Lune Estuary; Grey Lags (*Anser anser*), and up to the end of the month small skeins of Grey Geese, species unknown, were seen almost every day flying south. A single Grey Lag spent the summer in the fields at the mouth of the Lune and is still there.

A few years previous to 1914 a pack of thirty to fifty Grey Geese did not migrate, but for two summers visited the coast bordering the southern shores of Morecambe Bay, flying inland to the hills of the West Riding of Yorkshire and Westmorland, sometimes being divided into two skeins. Here they spent most of their time on the mountains, visiting the coast at intervals.

Although the Grey Lag is common now in north Lancashire in winter, in those days it was almost unknown in the county, so that it is most probable that these Geese were Pink-footed, although their identity was never discovered.

H. W. ROBINSON.

NESTING OF THE POCHARD IN CUMBERLAND.

ON May 19th, 1927, I visited a tarn in the county, where a party of six adult male Pochards (*Nyroca f. ferina*) had been observed as late as May 13th, but on the former date only two males were to be seen.

Suspecting that the females might be nesting, I commenced wading the extensive rush-covered margins of the tarn, eventually disturbing a brood of recently hatched ducklings, which almost immediately disappeared amongst the rushes.

Presently, two of these ducklings emerged from the rushes and swam out upon the open water where they were joined by a bird which I recognized as a female Pochard. She was observed working her way through the dense clumps of rush, near the place where the brood had been disturbed, before she rose to fly to her offspring on the water.

During further search I discovered the nest, situated in a thick clump of rushes. It contained two eggs, which on blowing were found to contain dead embryos about fifteen to twenty days old. This, as suggested by Mr. L. E. Hope, Director of Carlisle Museum, who examined the eggs and down, may have been due to the very cold weather and a few frosty nights we had at the end of April.

The nest was substantially built and, with the exception of a quantity of down which lined the interior, was entirely constructed of dead rush. The inner cup with high outer fringes was raised about ten inches above the level of the water. It was situated about twenty yards from the edge of open water, in the midst of an area of wet, rush-covered ground three or four acres in extent and covered for several hundred yards round the nest with two feet of water.

On May 29th I again visited this locality, and whilst wading the opposite side of the tarn I flushed a second female from a nest similar in situation and construction to the one found on the 19th. She left the nest within a few feet of me and settled on the muddy margin of the tarn a few yards away, to slowly paddle forward towards deeper water, occasionally quickly turning her head and looking anxiously about, though not uttering any note. This nest also contained two eggs.

On June 5th one unfertile egg remained. Whether this second bird succeeded in hatching any eggs is not certain, as during subsequent visits neither females or their offspring were ever observed.

The two male partners of these nesting ducks were present during all visits made to the tarn from May 19th to June

6th inclusive, generally together, resting on the open water.

As far as I am aware this is the first recorded instance of the Pochard nesting in Cumberland. R. GRAHAM.

SCAUP-DUCK AND COMMON SCOTER INLAND IN SOMERSET.

THE following two duck records from the Berrow Reservoirs, N. Somerset, for 1926, seem worth a note.

On January 5th I watched a female Scaup (*Fuligula marila*) associating with Tufted Duck on the middle of the three reservoirs. This was the first and only Scaup I have seen on these waters, but curiously enough I found more than a year afterwards that four were seen there a fortnight later by Mr. S. Lewis on January 19th (*Report of the Ornithological section of the Somerset Archæol. and Nat. Hist. Soc. for 1926*). This party of four may or may not have included my bird, but the other three at least must have represented a second arrival independent of bird No. 1, as there was quite definitely only one on January 5th.

On April 3rd and 5th of the same year I watched a female Common Scoter (*Oidemia nigra*) on the most northerly reservoir, the same on which I observed a drake in April, 1925 (*Brit. Birds*, Vol. XVIII., p. 267). The bird was clearly in sound condition and was diving freely. Evidently it was a voluntary visitor. I have little doubt that these north Somersetshire reservoirs should be added to the list of localities which are visited occasionally by Scoters in the course of ordinary migration and not merely as storm-driven waifs. B. W. TUCKER.

SHAGS AT OXFORD.

A FEW days prior to December 30th, 1926, an immature Shag (*Phalacrocorax aristotelis*) appeared on the Thames at Oxford, actually within the city boundary. It is stated to have been accompanied at first by another similar bird, which was apparently shot by some irresponsible person, but the survivor, though apparently uninjured and in excellent condition, remained on the river for many weeks. It was watched diving for fish by the writer and various other observers, and indeed became quite a familiar object to passers-by on the towing-path. It was there all through January and February, and at least as late as March 15th, and as far as is known eventually left unmolested.

The Rev. F. C. R. Jourdain in the *Natural History of the Oxford District*, published for the meeting of the British

Association, 1926, mentions about eleven previous records of Shags near Oxford, but certainly the majority of these occurrences have been merely of passing wanderers going up or down the river, and such a lengthy visit as the above must be almost unprecedented.

B. W. TUCKER.

LEACH'S FORK-TAILED PETREL INLAND IN LANCASHIRE AND CHESHIRE.

THOUGH storm-driven Petrels are not infrequently picked up inland, they are not so often seen flying over inland waters.

On October 29th, 1927, the day following the great S.W. gale of the night of October 28th-29th, my wife and I watched a Leach's Fork-tailed Petrel (*Oceanodroma l. leucorrhoa*) flying over Marbury Mere, near Northwich, Cheshire.

It flew in a hovering way over the water, pattering with its feet as it did so, and seemed to be trying to pick something from the surface; after a time several Black-headed Gulls (*Larus r. ridibundus*) chased it, and to avoid them it twisted and turned very rapidly, finally coming to rest on the surface of the mere quite close to us. Its size, the length of its bill, a distinct brown band across the wing and the grey tinge on the black head made its identity certain, though we could not see the fork in the tail from the angle at which it approached us. There were no signs of it on the following day.

In the *Daily Dispatch* of November 2nd, 1927, it was reported that a Storm-Petrel had been "shot in mistake for a Snipe" on the Flash, near Leigh, Lancashire. Mr. W. Compston secured the bird, which had been shot on October 29th, and kindly showed it to me. It also proved to be a Leach's Fork-tailed Petrel. In this specimen the tips of the secondaries were very definitely fringed with white, which the *Practical Handbook* records when freshly moulted; none of the skins which I have examined in the Dresser Collection show this feature so clearly, but doubtless these have faded to some extent. This bird is being preserved for the Manchester Museum. These two localities are only some 15 miles apart in a direct line.

On the same day—October 29th—there was a Knot (*Calidris c. canutus*) by the side of Witton Flashes, Northwich; when disturbed it rose to a great height and eventually flew off in the direction of the nearest salt water. No doubt this bird also was driven in by the storm, as Knots are more often seen inland in this district at the height of the migration period.

A. W. BOYD.

TWO DUNLINS LAYING IN THE SAME NEST.

IN South Uist on May 21st, 1927, I found a nest of a Dunlin (*Calidris a. schinzii*) containing six eggs of two distinct types and evidently the produce of two hens. The nest was "overflowing" and to leave room for the birds to complete laying, if they had not done so already, I removed two eggs. These eggs had not been incubated. Returning on the 23rd, I found that the nest had been raided and the eggs sucked, but close at hand was another nest with four eggs, obviously laid by the same two hens. It would appear that each hen had laid five eggs on successive days. Apropos the sucking of these eggs, it was fatal even to stoop to a nest in this country. By far the worst and boldest robber was the Common Gull (*Larus c. canus*). It was necessary only to fumble in the grass and pass on and a cluster of puzzled birds of this species would assemble at the spot.

GUY CHARTERIS.

[An interesting feature in the above note is the fact that both hen birds laid five eggs. Mr. S. Boorman has a clutch of six eggs in his collection, but these are uniform in type and apparently laid by one bird. Mr. R. H. Brown (*Br. B.*, XVIII., p. 88) refers to a brood of six young observed on the Solway.—F. C. R. JOURDAIN.]

SPOTTED REDSHANKS IN SUSSEX.

I OBSERVED two Spotted Redshanks (*Tringa erythropus*) near the mouth of the River Cuckmere on September 2nd and 3rd, 1926. One bird was certainly an adult in summer plumage, the other appeared to be in immature dress.

I noticed a party of four of these birds at Rye Harbour on September 2nd, 1927.

HOWARD BENTHAM.

SPOTTED REDSHANK AND KNOT IN THE SCILLY ISLES.

A SPOTTED Redshank (*Tringa erythropus*) was seen on Tresco by Major A. A. Dorrien-Smith during several days in September, 1927, the last occasion being the 14th. In Messrs. Clark & Rodd's "Birds of Scilly" (*Zoologist*, July, August and September, 1906) only two records of this species are given, one seen on Bryher, October 12th, 1865, and one killed on the same island on August 26th, 1870.

The Knot (*Calidris canutus*) is also a rare bird on Scilly, although probably overlooked on the autumn migration. One seen by Major Dorrien-Smith on August 28th, 1927, remained several days.

H. W. ROBINSON.

BLACK-TAILED GODWITS IN SOMERSET IN 1926.

OWING to lack of leisure I have not previously placed on record the occurrence of Black-tailed Godwits (*Limosa limosa*) in at least two localities in Somerset in the autumn of 1926. On September 12th I had an excellent view of one of these birds on two occasions during the day at Blagdon Reservoir, and a few days later, on September 19th, I watched another solitary bird on the Steart flats, to the west of the mouth of the Parrett on the Bristol Channel coast.

In Somerset, as elsewhere in the west, the Black-tailed Godwit is rarely met with, and the first of the above records appears to be the only one from an inland locality since Cecil Smith added the species to the county list on the strength of a specimen shot in the Bridgwater Marsh in 1868. The above observations rather curiously parallel my experience in Somerset with the Spotted Redshank (*Tringa erythropus*), another rare species in the county, of which I saw solitary birds in the same two places in the same order at almost the same interval in September, 1923 (*Brit. Birds*, Vol. XVII., p. 211).

B. W. TUCKER.

LATE APPEARANCE OF LITTLE TERN IN DEVON.

ON October 29th, 1927, I watched a party of five Little Terns (*Sterna a. albifrons*) flying together and feeding in the Exe Estuary, close to Starcross Station.

As the date seems an unusually late one, the record may be of interest.

I may add that I saw a single bird of this species near the same place on October 14th, 1927.

R. M. BYNE.

HEN-HARRIER IN FORFARSHIRE.—Lord Scone writes that a Hen-Harrier (*Circus c. cyaneus*) was shot near Brechin in the first week of October, 1927.

SPOTTED CRAKE IN PERTHSHIRE.—Lord Scone reports that a Spotted Crake (*Porzana porzana*), apparently a female of the year, was shot at Moncreiffe, Bridge-of-Earn, on October 15th, 1927.



LETTERS



CURIOUS BEHAVIOUR OF SPOTTED FLYCATCHERS.

To the Editors of BRITISH BIRDS.

SIRS,—A pair of Spotted Flycatchers (*Muscicapa s. striata*) nested low down in the stem of a small pear tree in a garden in co. Dublin this summer (1927). The nest contained two normal eggs and an addled miniature. As soon as the two eggs hatched, it became a regular habit of the parents to frequently "stoop" from a perch near the nest, pick a leaf from the ground beneath, carry the leaf to the top of a tree and there release it. This curious behaviour continued at intervals till the young were fledged and left the nest.
LONDON.

H. A. F. MAGRATH.

NEST-BUILDING BY MALE WARBLERS.

To the Editors of BRITISH BIRDS.

SIRS,—I cannot add any data to the Rev. E. Lorimer Thomas's observations (*antea*, p. 151) on nest-building by the male Lesser Whitethroat (*Sylvia c. curruca*) before the arrival of a female, but have notes on three cases where a male Garden-Warbler (*S. borin*) frequented an area of small bushes or garden shrubbery for three to five weeks, singing vigorously during its occupation, and in each case two to four nests were found (some only partly built) but no female was ever seen, and the male disappeared. A male Common White-throat (*S. c. communis*) possessed some blackthorn bushes and constructed three nests before a female arrived, whereupon one nest was lined and the rim decorated (by the female?) and four eggs laid. An unlined nest of a Willow-Warbler (*Phylloscopus t. trochilus*) was found in the fourth week of May, and a male heard singing near it; two more visits showed the nest still unlined, but in the last week of June a female was flushed from three eggs in the then scantily-feathered nest.
R. H. BROWN.

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ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND

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NOTES FROM THE SOUTH LANCASHIRE COAST.

BY

F. W. HOLDER AND R. WAGSTAFFE.

THE following notes consist of observations made by the writers during the period between the latter part of 1924 and the summer of 1927. Some of the records have been obtained on the dune coast between Southport and Formby Point, and others on the Ribble Estuary and Martin Mere.

HOODED CROW (*Corvus c. cornix*).—A fairly regular visitor in late autumn to Martin Mere, but rarely staying through the winter. The birds are rare in the spring, two occurring on April 8th, 1925.

GOLDFINCH (*Carduelis c. britannica*).—Nested at Churchtown in 1926.

TWITE (*Carduelis f. flavirostris*).—Formerly plentiful in winter about the estuary sea-wall, but less frequently observed of late years. Arrivals noticed on October 17th, 1927.

CORN-BUNTING (*Emberiza c. calandra*).—Since 1924 this Bunting has wintered freely on Martin Mere, where previously it was best known as a partial migrant. Spring flocking is rare in this district. Between April 21st and May 6th, 1925, a flock of about 150 birds was regularly observed in the reed-beds of the unreclaimed mere, from which occasional visits were made to the waste ground adjacent to the cultivated area. A nest was observed situated rather low down in the fork of a willow growing on the bank of a broad ditch, the young being successfully reared.

SNOW-BUNTING (*Plectrophenax nivalis*).—One at Ainsdale beach on March 8th, and two on November 1st, 1925.

WHITE WAGTAIL (*Motacilla a. alba*).—Usually appears in April, but has arrived twice in March—March 23rd, 1925, and March 20th, 1927.

NUTHATCH (*Sitta eu. affinis*).—A rare bird in south-west Lancashire. One frequented a garden at Churchtown during the last week in June, 1927.

LONG-TAILED TITMOUSE (*Ægithalos c. roseus*).—Of late years a decidedly uncommon species near Southport. A party occurred at the Shooting Box, Martin Mere, in December, 1926, and one at Churchtown in April, 1927, where our last nest was seen in 1912.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—A male in Hesketh Park, Southport, on May 3rd, 1927.

GRASSHOPPER-WARBLER (*Locustella n. naevia*).—In song in a town garden on June 12th, 1926.

RING-OUZEL (*Turdus t. torquatus*).—Rare on the coast. A pair on the Ainsdale dunes, April 3rd, 1927.

BLACK REDSTART (*Phœnicurus o. gibraltariensis*).—An adult male seen by Mr. S. J. Hunt on the sea-wall, near Southport, October 27th, 1926.

HOUSE-MARTIN (*Delichon u. urbica*).—A late passage observed on Ainsdale beach, June 6th, 1926.

SHORT-EARED OWL (*Asio f. flammeus*).—On June 7th, 1925, we flushed a bird from the low hills at Ainsdale, whereupon it was immediately mobbed by the Terns. We afterwards carefully searched the vicinity, but could not locate a nest.

PEREGRINE (*Falco p. peregrinus*).—Seen at Banks on November 9th, 1924, and at Ainsdale on December 6th, 1925, and March 16th, 1926.

PINK-FOOTED GOOSE (*Anser brachyrhynchus*).—During the past winter the Pink-foot was abundant on Martin Mere, the numbers far exceeding those of any individual year during the past twenty. All grey Geese examined by us in the flesh in 1926-27 were, without exception, Pink-footed, and, so far as our experience goes, this species has always been predominant among the grey Geese on this coast.

BARNACLE-GOOSE (*Branta leucopsis*).—Single birds shot on the Ribble Estuary in recent winters were almost certainly individuals from Hesketh Park, Southport, but a skein of five flying west over the Ainsdale dunes on September 7th, 1927, could not have come from local ornamental waters.

PINTAIL (*Anas a. acuta*).—Since 1924 this bird has become a regular visitor to the dune tarns in March and April. Eleven were present with Mallard, Teal and Wigeon on March 4th, 1925.

COMMON SCOTER (*Oidemia n. nigra*).—Following the westerly gales of December, 1924, scores were washed up dead between Birkdale and Formby. Small parties of Scoters annually frequent the dune beach from early January to March, and courtship flights are frequently observed at that period. We have observed the courtship displays, so well described by D. Gunn, on the Marine Lake, Southport, but weeks earlier than the date he mentions. Large flocks of Scoters on the beach are apparently unusual. On January 23rd, 1927, a heavy snowfall having fallen on the 22nd, there were several hundreds on the beach at Freshfield. From that date to February 13th, the Scoters continued to occur on the beach in large numbers. We have a previous note of a similar assemblage—August 5th, 1923, when weather conditions were summer-like.

VELVET-SCOTER (*Oidemia f. fusca*).—A small invasion of storm-driven birds of this species was noticed during the first half of January, 1925. Birds were seen on the beach, the dune tarns, and also on the Marine Lake at Southport, whilst a drake appeared on the Martin Mere Sluice, three miles inland. A drake at Marshside on February 13th, 1927.

GOOSANDER (*Mergus m. merganser*).—Two females were shot at night by a gunner on Martin Mere, December 17th, 1925.

MANX SHEARWATER (*Puffinus p. puffinus*).—A stranded bird at Ainsdale on August 8th, 1926.

FULMAR (*Fulmarus g. glacialis*).—An adult picked up dead at the foot of the Ainsdale dunes, March 14th, 1926.

GREY PLOVER (*Squatarola s. squatarola*).—The winter flock was treble its usual proportions from January to March, 1925.

KNOT (*Calidris c. canutus*).—Remarkably abundant throughout the winter of 1924–25.

CURLEW-SANDPIPER (*Calidris testacea*).—Two on the margin of the Hesketh Park lake, Southport, October 7th, 1927.

BAR-TAILED GODWIT (*Limosa l. lapponica*).—Two which were observed in a flock of seventy birds at Ainsdale on March 14th were in nuptial dress. From 1918 to 1925 the flock that remained through the summer on the Ainsdale coast averaged about fifty birds, but in the summer of 1926 and 1927 only odd birds were observed. The wintering flock in 1926–27 was roughly about 300 birds strong, but on Mad Wharf at Freshfield on February 20th, 1927, the birds occurred in amazing numbers. The huge flock strung out along the tide margin was estimated to comprise between 1,500 and 2,000 birds. There is usually an influx of these birds noticeable on our coast after a severe frost.

BLACK-TAILED GODWIT (*Limosa l. limosa*).—Birds were observed at Ainsdale on the following dates: July 26th, 1925 (11); August 8th, 1925 (7); November 29th, 1925 (3); August 1st, 1926 (1), and at Banks on November 16th, 1924 (1); July 25th, 1927 (2).

WHIMBREL (*Numenius p. phaeopus*).—One at Ainsdale after a north-west gale on November 29th, 1925, which may have remained, for a bird was heard and seen in the same quarter on December 13th, 1925.

GREAT SNIPE (*Capella media*).—One under observation for twenty minutes in a wet pasture at Marshside, March 19th, 1926.

BLACK TERN (*Chlidonias n. niger*).—An immature bird at

Ainsdale on July 25th, 1926—our third record for the month. In 1927, adults were at Ainsdale on May 1st and June 10th, and at Banks on September 7th.

SANDWICH TERN (*Sterna s. sandvicensis*).—Early arrivals on passage in spring are usually seen in twos and are probably pairs. Their course being as a rule S.E. to N.W., it seems probable that an overland passage is made. The first birds were observed at Ainsdale on April 10th, 1925, and April 22nd, 1926, whilst a party of fourteen were resting there on April 17th, 1927. It is certain, however, that only a minority of the Ravensglass birds touch this coast in spring. Adults occasionally appear during the summer months, and passage in late August and September is regular.

ROSEATE TERN (*Sterna d. dougallii*).—The status of this species in south Lancashire is still somewhat obscure. Prior to 1924 we should have described the bird as a casual or wanderer occurring in late July. From June 7th to July 5th, 1925, we frequently watched a pair on the outer hills at Ainsdale, and also on the adjacent shore, but without observing any signs of a nest. In the first half of May, 1926, and again in 1927, odd pairs were seen among the abundant Common Terns, but apparently the Roseates were only loitering on passage.

COMMON TERN (*Sterna h. hirundo*).—An adult picked up by us on the Ainsdale dunes was dissected, and death was found to be due to the lining of the gizzard having become fixed in the œsophagus: therefore, it seems possible that the Tern ejects the gizzard lining as is the case with the Curlew. Another bird found dead on a nest still retained mottling on the lesser wing coverts. For some years we have carefully watched for first-year birds, and whilst Terns in this phase of plumage are scarce, a few usually summer on the south Lancashire coast. These dark-billed birds are usually much later in arriving than the adults, and our dates for the last three years are: June 7th, 1925; June 30th, 1926; June 10th, 1927. The largest party noted consisted of seven birds which were frequently under observation throughout July, 1926, being last seen on August 1st. For some inexplicable reason, the first-year Tern acquires some of the pugnacity of the adult and occasional "stoops" have been made at us while on the beach.

SCANDINAVIAN LESSER BLACK-BACKED GULL (*Larus f. fuscus*)
BRITISH LESSER BLACK-BACKED GULL (*Larus f. affinis*).—In winter Lesser Black-backed Gulls do not occur on the local coast in the numbers recorded by H. W. Robinson from north

Lancashire. One or two are seen casually from November to February. We would cite the following records for *L. f. fuscus*:—December 3rd, 1922 (2); November 11th, 1923 (1); and March 31st, 1927 (1). Adults of the subspecies *L. f. affinis* seen on passage from March to mid-May are almost invariably in nuptial dress, although one at Banks on March 7th, 1926, still retained the winter head-streaks.

KITTIWAKE (*Rissa t. tridactyla*).—The appearance of small parties of adult Kittiwakes on Ainsdale Beach in late spring is perhaps worthy of notice. For the last ten years the birds have paid constant visits in June without lingering. Both adults and birds in the "tarrock" plumage occurred on June 10th, 1927.

GREAT SKUA (*Stercorarius s. skua*).—An adult flying south-west was observed at sea about three miles north-east of Beaumaris, Anglesey on July 15th, 1927.

ARCTIC SKUA (*Stercorarius parasiticus*).—Ten birds at Banks on August 9th and also on the 10th, while one occurred at Ainsdale on August 28th, 1927.

QUAIL (*Coturnix c. coturnix*).—Not known as a nesting species in our area for many years, but a pair remained through the summer of 1926 on Martin Mere.

NOTES

ALBINO HOODED CROW IN IRELAND.

A PURE white Hooded Crow (*Corvus c. cornix*) was trapped at Dunsany, co. Meath, on November 12th, 1927. When alive the irides were pale pink, after death they changed to pale grey. Varieties of the *Corvidæ* are fairly common in Ireland, with the exception of Raven, Chough and this species. In fifty years' experience this is the first variety of the Hooded Crow I have met with, and think it is of sufficient interest to record.

W. J. WILLIAMS.

THE 1927 IRRUPTION OF THE CROSSBILL*.

A FEW more notes on the Crossbill irruption have been received, but most of these are from districts from which we have already published reports. I think it may be said that the immigration has now been well recorded from all parts of the country.

Observers should be watchful during the next few months for definite signs of a return movement and also for evidence of nesting, for it must be remembered that in the spring following the last irruption many Crossbills settled down, at all events temporarily, to breed.

I have received from Mons. Georges Olivier of Elbeuf some interesting notes on the appearance of Crossbills in Normandy. He writes that on July 17th and 21st two parties were seen near Fécamp (Seine Inférieure) and on the 21st about a dozen birds near Rouen. He had not seen Crossbills in Normandy since the winter 1911-12. H.F.W.

ENGLAND AND WALES.

SHROPSHIRE.—Mr. H. E. Forrest writes: "Reports of Crossbills continue to reach me from various parts of Shropshire. A flock of thirty to forty were seen attacking garden peas at Brosely in the latter part of September. Two red males were watched tearing cones to pieces at Church Stretton on October 18th; while on the 22nd a small party was seen, similarly employed, in the general cemetery, Shrewsbury. Miss Francis Pitt has not seen any herself, but hears of them on all sides around Bridgnorth."

CARDIGANSHIRE.—Professor J. H. Salter informs Mr.

*For previous notes see *antea*, pp. 90-3, 121-7, 153-5 and 175-7.

Forrest that on August 6th a single Crossbill—very tired and very tame—was seen in a garden at Tregaron.

CORNWALL.—On July 4th Mr. F. S. Chapman found a dead female on the east shore of the Lizard, and was told that several were seen flying in from the sea early in the morning.

DEVONSHIRE.—On October 9th Mr. W. Walmesley White saw four, and on November 22nd eight at Budleigh-Salterton, these being the only birds seen since the end of August.

NORFOLK.—*Correction*.—On page 177, line 6, for “single birds in twos and threes” read “birds singly and in twos and threes.”

STATUS OF WOOD-LARK IN PEMBROKESHIRE.

AN editorial note in Vol. XIX. (p. 313) states that the Wood-Lark (*Lullula a. arborea*) “appears to have decreased considerably, and to be chiefly known as a winter visitor, so that evidence as to its present status as a breeding species seems to be important.” The following observations may, therefore, be of interest.

I doubt whether this species has really decreased appreciably since T. Dix described it as “very generally distributed, and a constant resident” (*Zoologist*, 1866). It is true that M. A. Mathew in his *Birds of Pembrokeshire* (1894) affirmed that the Wood-Lark was then almost extinct as a breeding species, remarking that during his eight years residence in the county, though he was “constantly driving about,” he had never seen or heard one in the summer; but—except with regard to “game-birds”—he is so consistently untrustworthy in questions of distribution, that his opinion is of little or no value. In any case the present status of the species seems to be much what it was in Dix’s time.

Mr. Charles Oldham and I have observed Wood-Larks in June in nearly every part of Pembrokeshire at all suited to their habits, from the coast of the Bristol Channel to the Teifi valley on the northern border; and in the well-wooded central districts they are by no means uncommon. On June 27th, 1924, near Boncath, we watched a pair at a nest containing two nearly-fledged young, and heard two others singing; on June 12th, 1927, we watched a pair and heard two others singing near Clynderwen; while in 1926 and 1927, we noted Wood-Larks in song near Eglwysrw (2); Manorbier (2); Pembroke, Picton (4); Narberth (5), and Letterston (3). Even on the almost treeless moors below Rosebush, some 750 feet up on the slopes of the Precelly mountains, one

was singing on June 13th, 1927, and another on the 14th (5 miles away). It is unlikely that all or most of these songsters were non-breeding birds; and a glance at the map in conjunction with the above list will suffice to show how freely the Wood-Lark is now distributed in the county.

BERTRAM LLOYD.

REPORTED BREEDING OF FIRE-CRESTED WREN IN LANCASHIRE.

In *Country Life* (September 3rd, 1927, p. 343) and again in *The Ibis* (1927, pp. 732-4) Mr. H. W. Robinson announces the discovery by Major G. Haines and his niece, Miss Ellis, of a pair of Firecrests (*Regulus ignicapillus*) about six miles south of Lancaster. The birds were first noticed on June 3rd, 1927, when the observers "distinctly saw the double black head stripes with the white one between." They were "collecting lichen off the wall and creeper, and flew towards a large ornamental yew-tree on the lawn." A search was made for a nest and one was found by Major Haines on June 6th. This was "suspended about two feet from the end of an outer branch [of the yew-tree] about twelve feet from the ground." The nest was made of "moss and lichen, but had very few spiders' webs in its composition."

On June 14th, when the nest contained eggs, Mr. Robinson visited the place. One of the eggs examined had a rosy tinge. The birds, however, were so quick that Mr. Robinson failed to identify them, and he adds that the nest "might easily have had no connection with the birds seen on the creeper, and might be merely Golderests." On July 9th, when the nest contained young, Mr. Robinson went again and saw the parents feeding the young, and states that the markings of the cock were distinct. "Still," he adds, "I was not quite satisfied." Later, Miss Ellis examined at close range the hen bird sitting on the nest, and described "her head as resembling that of a little tiger."

On July 18th, on the nest being approached from a step ladder, the young fluttered out but were collected to the number of five and replaced. "On putting them back," writes Mr. Robinson "each tiny atom of feathers showed a minute small lemon-coloured tuft on the crown, which is most certainly not found at this stage in the juvenile Goldcrest, moreover the moustachial streak was well developed." Mr. Robinson does not state who made this observation, but it may, perhaps, be assumed that he did not himself examine the young, though even this is not clear. In his view the

fact that the young had a lemon-coloured tuft on the crown clinches the matter of identification, and incidentally shows that the description of the juvenile in Saunders, Dresser and the *Practical Handbook* is wrong. The description in the *Handbook* was made from actual specimens, six in number, and these I have re-examined and can only re-assert that the "lemon-coloured crest" is absent from all of them.

Mr. Robinson also states that "poor, out-of-date and rather despised old Morris gives the true state of affairs." But it is evident that Morris's description of the juvenile Firecrest as having a pale lemon crest was based upon an adult female Goldcrest, since he states that the sides of the head are cinereous without any streaks. Morris makes a further mistake in describing the adult female Firecrest as having a fiery crest like the male, whereas it is yellow.

It is a great pity that one of the young was not taken and preserved in some Museum. This would have afforded definite, scientific proof of the statements made and could not have endangered the status of the bird.

As this definite proof is wanting, we have thought it best to quote all the essential evidence in order that our readers may judge for themselves whether the first breeding of the Firecrest in this country is established. At the same time we would point out that the discrepancy in the description of the young does not necessarily condemn the record.

H. F. WITHERBY.

WAXWING IN PERTHSHIRE.

SINCE the middle of November, 1927, a Waxwing (*Bombycilla garrulus*) has frequented the garden at Dalguise, Perthshire. It is very tame, and seems to feed principally on the berries of the guelder rose (*Viburnum viburnum*).
SCONE.

WAXWING IN DURHAM.

ON November 19th, 1927, I saw a Waxwing about two miles from the coast near Sunderland. A strong easterly wind had been blowing for some days. The bird flew off inland, with a kind of whistling trill.
JOHN BYERS.

LESSER WHITETHROAT IN PEMBROKESHIRE.

AFTER severe stormy S.W. gales at the end of October, 1927, an unusual visitor was noticed on the island of Skokholm. On November 3rd, 1927, a Whitethroat was observed creeping tamely about among some dead nettlestems in a sheltered spot. It remained for six hours, during which time I had

ample opportunity to identify it as a Lesser Whitethroat (*Sylvia c. curruca*). Mr. Bertram Lloyd records a bird of this species in Pembrokeshire in June, 1927 (*cf. antea*, p. 178).

RONALD M. LOCKLEY.

ECCENTRIC NESTING OF THE MISTLE-THRUSH IN MAN.

MR. J. A. CORTEEN, of Laxey, sends me the following particulars of the nesting of a pair of Mistle-Thrushes (*Turdus v. viscivorus*) at the Dhoon granite quarry between Laxey and Ramsey.

About the middle of May, 1926, a workman called his attention to two nests built on the top of a light flat beam which supported the floor of the platform of a stonebreaker belonging to the Manx Electric Railway, and which for some years had not been used. One of the nests was completed and contained three eggs, the other was a little more than half finished and contained two eggs. It was observed that the bird sat alternately on each nest, and, if disturbed from one, would remove to the other, the nests being about 20 inches apart. "She sat out," says Mr. Corteen, "the full period of incubation, but without result, caused no doubt by the eggs in each nest being so often chilled." The nest with two eggs was at last robbed by a schoolboy, and Mr. Corteen had both nests removed.

In April, 1927, there were again two nests in the same position, a nest almost complete where the incomplete nest had been the previous year, and a smaller nest where the complete nest had been placed in 1926. Both nests were pulled down by a boy, but later, by June 23rd, there were again two nests, one complete and the other incomplete. This time four eggs were laid in the *incomplete* nest and all were hatched out. One young bird fell from the nest and perished, the others left on July 17th.

A high road passes on one side of the platform, and on the other side the electric railway line.

In 1927, Mr. Corteen found another Mistle Thrush's nest in a little square niche in the wall of an old roofless house, and nesting in such situations is indeed very frequent in certain districts of the Island.

P. G. RALFE.

BLACK REDSTART IN MERIONETHSHIRE.

ON December 4th, 1927, when in a little valley near Fairbourne, I saw a Black Redstart (*Phænicurus o. gibraltariensis*); it rose within five yards of me from the side of a stream and

flew up a high adjoining bank, alighting for a moment every few yards on the bank, and so giving me several good views at short range.

The bird was in good plumage, and from the brightness of the white wing-patch it was probably an adult male.

GREGORY HAINES.

AVERAGE BROOD OF SWALLOWS IN CARMARTHENSHIRE DURING AUGUST.

THE following table gives the average brood of Swallows in Carmarthenshire, within a radius of five miles. All the nests were visited either in August or the last two or three days of July. The averages of the last five years are singularly constant, the mean being 3.95.

	No. of Nests Examined	Broods of 5	Average Brood Reared
1922	20	2	3.71
1923	32	7	3.94
1924	24	7	3.96
1925	40	12	3.90
1926	45	12	4.04
1927	41	15	3.90

J. F. THOMAS.

STATUS OF LITTLE OWL IN PEMBROKESHIRE.

It may perhaps be of interest to record that on the islands of Skokholm and Skomer the Little Owl (*Athene n. vidalii*) is now resident, whilst on the mainland of Pembrokeshire, at least in the open country about Milford Haven, it is now the most abundant Owl.

RONALD M. LOCKLEY.

BIGAMY IN THE SPARROW-HAWK.

A NUMBER of cases have been recorded during the last few years in which from eight to ten or eleven eggs have been found in nests of the Sparrow-Hawk (*Accipiter n. nisus*) and evidence more or less complete has been brought forward as to the presence of two females at the nest. A letter

appeared in the *Field* for June 14th, 1927, p. 1034, from Mr. A. M. Emmet, writing from School House, Sherborne, who states that he was shown a Sparrow-Hawk's nest by a keeper who had shot the female already from the nest, and on climbing the tree was surprised to find nine eggs there. Three of them were broken, but the remaining six seemed to fall into two distinct classes, suggesting that they were the produce of two hens. On July 21st, 1927, another letter appeared in the *Field* for that date (p. 87) from Major A. A. Perceval, who records two similar cases which had come under his notice during the last few years. In 1927 a hen was shot from a nest, but, failing to get the cock, the keeper climbed to the nest to place a trap there and found a second hen lying dead, evidently killed by the same shot. There were eight eggs lying scattered about. The other case took place three or four years ago, and on this occasion there were two distinct nests side by side, and the keeper killed two hens and one cock, but there was no sign of a second cock. No locality is given in either case.

The following table summarizes the records referred to above. It is unfortunate that, as is so frequently the case with records reported in the *Field*, no locality is given with Major Perceval's notes.

Authority	Locality	No. of Eggs	Date	Notes
F. R. S. Bal-four of Dawyck, <i>Field</i> , 24.V.23. Cf. <i>Br.B.</i> , XVII., p. 288	Stobo, Tweed-dale, N.B.	10 (Also 1 in oviduct of ♀ shot) evidently 2 clutches	11th May, 1923	1 ♂ and 2 ♀♀ shot from nest
J. Hughes Onslow, <i>Scott. Nat.</i> , 1925, p. 95. Cf. <i>Br. B.</i> , XIX., p. 180	Barr, Ayrshire, N.B.	8 (Arranged in rows of 4)	23rd May, 1925	Two birds flew from nest, subsequently 2 ♀♀ killed near by or at the nest; ♂ escaped
N. Greeves, <i>Br. B.</i> , XX., p. 77	Strandtown, Belfast, Ulster	9 2 eggs boldly marked others less so	4th June, 1926	5 eggs laid within 7 days, 2 ♀♀ seen subsequently at the nest (June 14th)

Authority	Locality	No. of Eggs	Date	Notes
A. M. Emmet, <i>Field</i> , 16. VI., 27	Sherborne, Dorset	9 Two distinct types of eggs in nest	—1927	One ♀ shot from nest, another bird reported sitting
Major A. A. Perceval, <i>Field</i> , 21. VII., 27	[?]	8	—1926	2 ♀♀ killed by one shot on nest; 1 ♂ also shot
Major A. A. Perceval, <i>Field</i> , 21. VII., 27	[?]	[Not stated] two nests side by side	1923 or 24	2 ♀♀ and 1 ♂ killed

Possibly some of the recorded clutches of eight eggs of this species for Hants, Kent, Oxon, etc., may also be due to similar causes.

F. C. R. JOURDAIN.

COMMON HERON REARING TWO BROODS.

IN 1927 two pairs of Common Herons (*Ardea c. cinerea*) nested in a group of spruce firs, and on March 27th one tree held a nest—small in structure—of two eggs, another tree a normal-sized nest with three eggs. On May 1st the small nest held two nestlings about a fortnight old; there was only an addled egg in the other nest, but from the faeces about it and the surrounding branches, young apparently had been hatched, and had died or been killed by Rooks (there is a large rookery less than a mile distant). The place was not visited again until August 21st, when a Heron was seen to fly to the group of firs and, on investigation, a nest of two fledged young was found in the tree which had previously held nestlings. The nest used for the first brood was lying among the branches a few feet below this nest, which was likewise of small bulk, and as the tree and the type of nest were the same for both broods, it seems the two broods were the product of one pair of birds. The other tree held an empty, but very faeces-splashed, nest, and probably a brood had been reared in it, although in this case the young were evidently a first brood from the second laying.

R. H. BROWN.

ALTHOUGH the wide discrepancies between the earliest and latest dates of the breeding of the Heron point strongly

to the rearing of a second brood in some cases at any rate, it is extremely difficult to get satisfactory evidence in a colony, as some birds may lose their first and second layings and thus be forced to breed much later than the rest. When the nests are much harried by Rooks, fresh eggs may be found at any date between February and June, but this merely shows that birds which have lost their eggs will go on laying at intervals for about three or four months. Conclusive proof of double broodedness is most probable in the case of isolated nests, and the late Robert Warren of Monkstown, co. Cork, was, I think, the first to give details of an occurrence of this kind in the *Zoologist* for 1910, p. 341. In the spring of 1896 a pair of Herons bred within 60 yards of Moy View Cottage and reared a brood of young, which were fully fledged by the end of April. On May 7th the old birds were observed building a second nest in a fir tree about 30 yards from the house, and on the next day a great noise of scolding or fighting attracted Mr. Warren's attention. He found that the young of the first brood had followed the old birds to the new nest and were persistently calling for food, while the old birds were scolding and driving them from the nest. The evidence in this case seems to be quite conclusive. In 1926 an isolated pair of Herons bred in a marshy wood in the Waveney Valley, Norfolk, and reared a brood of young. On May 12th I saw one of the birds leave the same tree and on examining the nest found extensive traces of the first brood, the branches and the ground being covered with whitewash. The old birds had relined the nest with fresh beech branches ready for the second brood, which was successfully brought off. In this case both broods were reared from the same nest, while in that recorded by Mr. Warren a new nest was built for the second brood.

F. C. R. JOURDAIN.

WHITE-FRONTED GOOSE IN KENT.

ON November 27th, 1927, a party of members of the London Natural History Society on the Thames Marshes, near Cliffe-at-Hoo, had excellent views of two White-fronted Geese (*Anser albifrons*). The white "front" was very well seen, especially on one of the birds, and the light bar on the flanks showed up quite well. They were both very confiding and went on feeding until we reached and opened the gate on the neck of land across the dyke separating them from us. They then at once took wing in the direction of the river.

JOHN E. S. DALLAS.

VELVET-SCOTER INLAND IN LANCASHIRE.

ON December 4th, 1927, I found a duck or immature drake Velvet-Scoter (*Oidemia f. fusca*) on the boating-lake of a park on the northern outskirts of Manchester. The ear-patches were well defined and conspicuous, the forward spots diffused. The white secondaries were well displayed when the bird raised its wings, but normally the speculum was only occasionally visible.

As an inland visitor, the Velvet-Scoter appears to be infrequent in Lancashire, and has only once been recorded from the neighbouring county of Cheshire (*Brit. Birds*, Vol. XVI., p. 221).

The bird, which was also seen by Messrs. A. W. Boyd and R. M. Garnett, remained on the water for a few days.

THOS. BADDELEY.

SLAVONIAN GREBE IN STAFFORDSHIRE.

ON September 2nd, 1927, I saw a small Grebe in winter plumage on the Gailey Reservoirs, Staffordshire. I watched it for some time and noticed that the dark colour on the head did not come below the eye, so think there can be no doubt that the bird was a Slavonian Grebe (*Podiceps auritus*).

B. A. CARTER.

ABNORMAL CLUTCHES IN THE WOOD-PIGEON.

ON p. 19, Vol. XXI. of *British Birds*, is a note of a nest of the Wood-Pigeon (*Columba p. palumbus*) containing three eggs, with an editorial footnote concerning similar cases. Of the several hundred nests I have examined in the course of my "ringing" during the past four years, I have found one nest containing three eggs (May 18th, 1926), and one with four (May 1st, 1927). In the first the eggs were almost certainly laid by one bird; they were as like as three peas, and all somewhat more elongate than usual. This nest hatched safely.

In the case of the second nest, which was in the same wood as the other, it was probably the produce of two Pigeons, as one pair of eggs seemed decidedly smaller than the other. All were, unfortunately, sucked by Rooks. I have known of several cases where only one egg was laid and hatched. Occasionally, an interval of several days elapses between the laying of the eggs; this year I found one nest in which one of the squabs was four or five days older than the other, and another in which the difference must have been about ten days; in the latter case the younger bird left the nest a fortnight after the elder.

In June of this year one of our foresters showed me a Pigeon's nest on the ground, in the middle of a Rhododendron bush.

All these records are from a radius of about four miles round Perth. SCONE.

KNOT IN BEDFORDSHIRE.

As the occurrence of the Knot (*Calidris canutus*) so far inland as Bedfordshire seems to be comparatively rare, it may be of interest to record that a bird of this species spent the day near one of our ponds at Woburn on November 28th, 1927. It had been extremely foggy for two days. The bird was very tame, only taking flight when one approached within a few yards of it, but it did not appear exhausted and was running about briskly in search of food after the manner of its kind.

M. BEDFORD.

BIRDS AT LONDON RESERVOIRS.

MR. J. P. HARDIMAN has handed me an interesting list of birds seen this year at the Reservoirs to the west of London by himself and other members of the London Natural History Society. I extract the following records:—

Species	Date	Reservoir	Remarks
Hobby (<i>Falco subbuteo</i>)	7.9.'27	Staines	2 seen.
Cormorant (<i>Phalacrocorax carbo</i>)	26.8.'27	Littleton	2 seen.
Black-necked Grebe (<i>Podiceps nigricollis</i>)	7.9.'27	Staines	1 in winter plumage.
	10.9.'27	do.	1 in winter plumage.
Knot (<i>Calidris canutus</i>)	10.9.'27	do.	2 in winter plumage.
Curlew-Sandpiper (<i>C. testacea</i>)	7.9.'27	do.	1 in winter plumage.
	10.9.'27	do.	{ 1 in winter plumage. 1 in partial summer plumage.
Greenshank (<i>Tringa nebularia</i>)	7.9.'27	do.	2 in winter plumage.
	16.9.'27	do.	
Black Tern (<i>Chlidonias niger</i>)	7.5.'27	Littleton	2 in summer plumage.
	7.9.'27	Staines	21 in partial winter plumage.
	10.9.'27	do.	2 seen.
Common Tern (<i>Sterna hirundo</i>)	7.5.'27	Littleton	6 seen.
	14.5.'27	Barnes	1 seen.
	1.8.'27	Staines	21 seen.
Little Tern (<i>S. albifrons</i>)	19.9.'27	Molesey	1 in summer plumage.

JOHN E. S. DALLAS.

RED-BACKED SHRIKE OFF CO. DUBLIN.—Mr. J. S. Barrington records (*Irish Nat. Journal*, 1927, p. 275) that a specimen of *Lanius c. collurio* was captured near the lighthouse on Rockabill on August 26th, 1927, and forwarded to him. There are only three previous known occurrences of this species in Ireland.

GOSHAWK IN YORKSHIRE.—Mr. B. Morley states (*Nat.*, 1927, p. 236) that on June 6th, 1927, a keeper shot a Goshawk (*Accipiter gentilis*) near Pontefract, when it was in the act of striking at a Partridge with chicks. The bird had been in the neighbourhood some time.

SCAUP-DUCK AND COMMON SCOTER INLAND IN SOMERSET.—*Correction*.—In the note on this subject (*antea*, p. 184), for Berrow Reservoirs, read *Barrow* Reservoirs.

SOCIABLE PLOVER IN ORKNEY ISLANDS.—Lieut. Commander P. H. Mackenzie reports (*Scot. Nat.*, 1927, p. 157) that on November 3rd, 1926, he shot a specimen of *Chettusia gregaria* at the edge of a turnip field in North Ronaldshay. The sun was nearly setting and he took the bird for a Golden Plover. It is a female in first winter plumage and is now in the Royal Scottish Museum. This eastern species is a very rare vagrant to the British Islands and has not previously been reported from Scotland.

LITTLE AUK INLAND IN KENT.—Mr. F. Howard Lancum informs us that a Little Auk (*Alle alle*) was brought alive to the Museum at Dartford on December 13th, 1927, having been found on the road side locally.

It was taken to the Park and lived for two days on the ornamental water there, and was seen frequently to feed upon sticklebacks and other small fish.

ON THE DECREASE OF BLACKGAME IN SCOTLAND.—Miss L. J. Rintoul and Miss E. V. Baxter have collected a valuable series of comparative observations, derived from a large number of correspondents and published records, on this subject. These facts have been embodied in a well-planned article, which has been published in *The Scottish Naturalist* (1927, pp. 5-13, 45-52, 69-75). From the reports from various districts it is clear that the Black Grouse (*Lyrurus t. britannicus*) has very seriously decreased in numbers during the last fifty years or so throughout Scotland. There is, however, evidence from a good many districts of a recovery during 1925 and 1926. There is a great difference of opinion as

to the cause of the decrease. Summing the matter up, the authors of this paper consider that Blackgame are unusually susceptible to external conditions, both of climate and environment, and that the principal cause of their decrease has been series of bad seasons; of contributory causes there are many suggestions, but the authors think that the chief factor is change in environment, produced by drainage and cultivation. It may be mentioned that, as pointed out in this article, Blackgame are being exterminated in various districts by order of the Forestry Commissioners and, according to the *Field*, this is actually being done in certain cases in the close season! That this action should be taken when the Black Grouse is in such a parlous state in Great Britain seems a great mistake, and such ruthless economy (if economy it is) could be better directed elsewhere.



LETTERS



NESTING OF THE SAND-MARTIN.

To the Editors of BRITISH BIRDS.

SIRS,—The eastern side of Bishop's Stortford railway station is bounded by a high retaining wall. Some ten feet above the permanent way this wall is pierced by a row of twenty-eight holes, half a brick in width and left presumably for drainage. Doomed on the afternoon of May 5th to wait an hour for a train in this peculiarly grimy and sordid place, I was interested to see Sand-Martins coursing up and down the permanent way, and flying in and out of most of these holes or settling on their threshold; the other holes were tenanted by nesting House-Sparrows. I did not see any of the Martins actually carrying nesting material, but obviously the holes constituted a small nesting colony. Bishop's Stortford is in the same drainage area as Rye House and is, in a direct line, about ten miles from that place, where, in 1923, Mr. P. F. Bunyard noticed Sand-Martins nesting under similar conditions. The existence of these two colonies in the same district may be of interest in connection with the points raised by Mr. R. H. Hellyar (*antea*, pp. 166-171).

CHAS. OLDHAM.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. Richmond H. Hellyar asks (*antea*, p. 170) for examples regarding the habit of some Sand-Martins (*Riparia r. riparia*), of utilising holes in walls for breeding when natural sites are available. In 1921, several pairs of Sand-Martins bred in the drain pipes of a retaining wall of part of one bank of the river Eden: the drain pipes were several feet above the water-level. The bank opposite, in a natural state, appeared to afford good tunnelling, but no birds nested there, yet about a mile further up the river Sand-Martins bred in both banks.

R. H. BROWN.

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NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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“BRITISH BIRDS” CENSUS OF HERONRIES.

WITH the number of competent observers at present available it seems possible to undertake a census of British heronries on a more comprehensive and accurate basis than has up to the present been attempted. There has, of course, been a good deal of work done already, some of it of considerable value. The late Mr. J. E. Harting long ago conducted such an enquiry through the *Field*; Mr. Frank Bonnett compiled a useful list which was printed for private circulation in 1912; in Scotland Mr. Hugh Boyd Watt, and in Ireland Messrs. Ussher and Warren tackled the subject with a considerable degree of success. Various county histories, including many volumes of the Victoria County Histories, contain useful information regarding the number, size, history and location of the local heronries, and this of course applies particularly to works devoted to the avifauna, some of which, like Mr. H. S. Gladstone's *Birds of Dumfriesshire*, are models in that respect.

Even if all these had been exhaustive and unimpeachable, which they are not, there would still be room for a census as complete as possible now, for changes in recent years have been very considerable, and ought to be recorded before it is too late. We are therefore including in every copy of this issue a Schedule and a postcard, which last we hope that every reader of *BRITISH BIRDS* will fill up and return to the office, stating for which particular heronry or heronries or areas he or she intends to send in returns, and how many additional Schedules (if any) are required. The Schedules themselves are to be kept and returned by the beginning of August, or as soon as the breeding season is definitely closed. A separate *Schedule* is to be used for every heronry, and *heronry* for the purposes of this census must be taken to mean any locality where the Heron breeds, even if there is only one nest. It is intended to cover every part of England and Wales, and as regards Scotland, whether all of this country can be included will depend upon the extent of co-operation promised. We feel sure that it will be possible to include at all events the southern areas of Scotland, and we shall be glad to hear from all who can undertake to make a census of any heronries in any part of Scotland. Whilst it may be necessary to restrict the area of the census in the interests of completeness, it must be particularly emphasized that data relating to questions 7-17 inclusive will be equally valuable whatever area they refer to, in the

United Kingdom or even abroad, provided of course that they are confined to *Ardea cinerea cinerea* and that the locality is properly indicated.

In order to be of value it is essential that returns should be as complete as it is possible to make them. The half-dozen questions of primary importance ought not to be difficult to answer, and it is hoped that as many readers as possible will take an active part, and enlist any reliable helpers they can, to whom we shall be glad to send out Schedules on receipt of the name and address. It is particularly desirable that question 6 should be properly attended to, as no accurate handling of densities will be possible unless it is known what areas, if any, have not been worked.

Marked Herons show a high recovery percentage, including some particularly interesting records, and if the census is accompanied by a special effort on the part of ringers to deal with as many of this species as possible this year, they will, no doubt, be rewarded by results which will at the same time enhance the value of the census and illuminate some obscure aspects.

Any help in the way of references, lists of heronries in any part of the country with information concerning them, etc., will be welcomed; observers are by no means expected to confine themselves to their home locality if they can report anything of interest from elsewhere. Queries or difficulties should be notified as soon as they arise, so that any of general concern can be dealt with in **BRITISH BIRDS**.

It may prove desirable to repeat the count next year, but readers are urged to do their utmost to ensure that the present response shall be adequate. Mr. E. M. Nicholson has consented to assist in working up results, a summary of which will be published in **BRITISH BIRDS** as soon as possible after the close of the enquiry.

THE EDITORS.

THE " BRITISH BIRDS " MARKING SCHEME.*

PROGRESS FOR 1927.

BY

H. F. WITHERBY.

ALTHOUGH the number of birds ringed in 1927 was rather less than in the previous year, the total is nevertheless the second largest since the scheme was started.

NUMBER OF BIRDS RINGED.

In 1927		...	...	21,625	
In 1909	..	2,171	In 1918	..	5,937
„ 1910	..	7,910	„ 1919	..	3,578
„ 1911	..	10,416	„ 1920	..	5,276
„ 1912	..	11,483	„ 1921	..	8,997
„ 1913	..	14,843	„ 1922	..	9,289
„ 1914	..	13,024	„ 1923	..	12,866
„ 1915	..	7,767	„ 1924	..	18,189
„ 1916	..	7,107	„ 1925	..	18,233
„ 1917	..	6,926	„ 1926	..	23,432
Grand Total		..	..	209,069	

The number of ringers is very satisfactory and I am glad to say that more scientific societies are taking up the scheme. The four leading "ringers" are the same as last year, except that Mr. Boyd has changed places with Mr. Mayall. Dr. Moon again heads the list with a slightly smaller total than his "record" in 1926. His total of two thousand seven hundred and seventy-nine includes forty-nine species, of which Song-Thrush (607), Blackbird (420), Lapwing (352), Willow-Warbler (187) are the largest numbers, while Pied Flycatcher (74) and Curlew (26) may be mentioned. Mr. Boyd's total of seventeen hundred and forty-one includes forty-six species, of which

* For previous Reports see Vol. III., pp. 179-182, for 1909; Vol. IV., pp. 204-207, for 1910; Vol. V., pp. 158-162, for 1911; Vol. VI., pp. 177-183, for 1912; Vol. VII., pp. 190-195, for 1913; Vol. VIII., pp. 161-168, for 1914; Vol. IX., pp. 222-229, for 1915; Vol. X., pp. 150-156, for 1916; Vol. XI., pp. 272-276, for 1917; Vol. XII., pp. 96-100, for 1918; Vol. XIII., pp. 237-240, for 1919; Vol. XIV., pp. 203-207, for 1920; Vol. XV., pp. 232-238, for 1921; Vol. XVI., pp. 277-281, for 1922; Vol. XVII., pp. 231-235, for 1923; Vol. XVIII., pp. 260-265, for 1924; Vol. XIX., pp. 275-280, for 1925; Vol. XX., pp. 236-241, for 1926.

Mallard (440) is the largest number, and Starling (245), Swallow (204), Greenfinch (164) and Turtle-Dove (21) are notable. Mr. Mayall has ringed a total of sixteen hundred and seventy-four of thirty-seven species, the greatest number being Swallow (285), House-Martin (221), and Song-Thrush (273), while Red-backed Shrike (21) may be mentioned. Lord Scone, who has ringed thirteen hundred and fifty-six of forty-five species, has devoted great attention to Woodcock (249), has ringed seven species of Duck (wild bred birds), and sixty-four Wood-Pigeon. Colonel Pollitt has ringed no less than fifty species in his total of twelve hundred and nineteen. Of these, Lapwing (205) is the largest number, but Snipe (110) and Heron (61) the most remarkable. The Messrs. Duncan's total of just over one thousand contains a number of sea-birds such as Shag (259), Herring-Gull (116), Razorbill (56), Manx Shearwater (32). St. Edmund's School, under Mr. Jones's guidance, have ringed nearly one thousand of thirty species, of which Rook (129) and Jackdaw (73) are the most notable. Mr. Brown's list comprises forty-eight species, of which Lapwing (206) is the largest number, while Heron (20) and Redshank (27) may be mentioned. Mr. Robinson's list includes Gannet (100), Lesser Black-backed Gull (229), while Woodcock (86) must be mentioned. In Mr. Morshead's list I notice Red-backed Shrike (19). Among those ringers new to the scheme we have to welcome the Clifton College Scientific Society, Messrs. J. Knox, A. P. Meiklejohn, the Oxford Ornithological Society, Messrs. D. J. Robertson, G. O. Budd, and S. T. C. Turner, Wellington College, and Mr. H. Went.

Among species which have been ringed in larger numbers than before may be mentioned Carrion-Crow, Rook, Jackdaw, Red-backed Shrike, Heron, Shag, Curlew, Redshank, Snipe and Woodcock. Mr. T. K. Craven has ringed thirty-five Ring-Ouzels, a bird to which not much attention has been paid, though it might yield interesting results.

It is to be hoped that Mr. Lincoln's article on Traps for Bird Ringing (*antea*, pp. 134-150) will be found useful, and that more ringers will specialize in this branch of the work. There is no doubt that most valuable results could be obtained by regular trapping at a number of "stations," and I hope that some of our readers, who have not yet done any ringing, will be induced to take up this important work.

In my last report I mentioned that, on Mr. E. M. Nicholson's initiative, an exhibit of "ringing" had been placed in Haslemere Museum, and I am pleased to say that during the year

several other Museums have organised similar exhibits, viz., Royal Scottish Museum, Edinburgh, Norwich Castle Museum, Hancock Museum, Newcastle, Reading Museum, and the Hereford Museum, while the British Museum (Natural History) are preparing such an exhibit. I hope that more Museums will follow suit, as such exhibits are not only interesting and educative, but also help to make known more widely the objects of ringing birds and the importance of reporting those found with rings.

The average percentage of recoveries of birds ringed up to the end of 1926 is approximately 2.7, and while in some species the percentage has dropped, in others it has risen. Perhaps the most notable and unaccountable drop has been in the Woodcock.

Among the interesting recoveries reported since my last report, I may mention two Starlings trapped by Mr. Boyd in Cheshire in winter and found in Schleswig-Holstein and Denmark in summer; a number of trapping and retrapping records of various species made by Mr. Boyd, Messrs. J. N. D. and T. L. Smith, Mr. and Mrs. Taylor, Mr. P. E. A. Morshead, the Rev. E. Peake and others; Mr. J. F. Thomas's valuable work in connection with ringing Wheatears and catching them up again.

A Razorbill ringed by Messrs. W. and A. B. Duncan in Sutherland in July, 1927, and reported from the Oslö Fjord in October is interesting, as we have already a record of a Guillemot performing exactly the same journey. A record has also come to hand of a Gannet ringed by Mr. H. W. Robinson at the Bass Rock, in August, 1927, being found near Fredriksstad, Norway, in November. There is a previous record of a Gannet ringed on the Bass being found in Norway. A Ring-Ouzel ringed in Yorkshire, also by Mr. Robinson, in May, 1927, was reported from Navarra, north Spain, on September 14th. A Moorhen ringed in Stirlingshire, in June, 1927, and reported from co. Tyrone in November is of some interest. A number of other species (especially Lapwing and Curlew) ringed in Scotland and England have also recently been reported from Ireland.

Some very interesting results of ringing Mallard and Teal have been reported, while the Wigeon hatched and ringed in Cumberland and found in spring in north-east Russia (*antea*, pp. 97-8) is a striking example of the value of the ringing scheme. This and other records of ringed ducks go to show that these birds spread from their birth-places much more widely than do other birds, so far as we know at present.

This important fact could scarcely have been suspected, and certainly not proved, without the help of ringing. If, as it would seem to be by the records, this is a general habit in certain species of ducks, we may, perhaps, find here a reason for the fact that so many species of ducks are not differentiated, some over their whole range, others over a great part of it. That different geographical forms of a species often join up on migration and in winter quarters is, of course, well known, as is the fact that occasional stragglers (e.g., Wagtails) breed in the area occupied by another sub-species, but it is obvious that if interbreeding of individuals from widely spread areas were habitual, as it would seem to be in certain ducks, differentiation depending upon segregation in the breeding season could not be permanently established. I hope that in the future great efforts will be made to ring large numbers of ducks of all species, both adult and young.

News has just reached me of a most remarkable transatlantic migration of Lapwings, of which I have not yet got full details, but must make preliminary mention now.

Canon A. G. Bayley of Bonavista, Newfoundland, writes me under date December 31st, 1927, and encloses the foot of a Lapwing (*Vanellus vanellus*) with one of our rings numbered X5046. This Lapwing was ringed as a nestling by Dr. H. J. Moon at Ullswater, Cumberland, in May, 1926. That a Lapwing ringed in this country should appear in Newfoundland is sufficiently remarkable, but Canon Bayley states that "thousands" of these birds arrived there in December. This is amply confirmed by Mr. F. A. Bruton, who informs me that he has heard from Mr. J. L. Paton, President of the Memorial College of St. John's, that numerous Lapwings were reported during December from a number of places in Newfoundland on the east coast, in the centre and on the west coast. I hope shortly to receive more exact information with regard to dates and other details of this migration, which, in view of the numbers concerned, is undoubtedly the most remarkable transatlantic migration of any species of bird ever observed. That large numbers of Lapwings should have safely accomplished such a journey is nothing less than astounding, and it is to be hoped that when we receive full details of this extraordinary event it may be possible to assign a cause more nearly than just to say that it was in some way connected with abnormal weather conditions. The Lapwing has previously only occurred on the American continent as a very rare straggler, and only once before in

Newfoundland, this being a single bird in November, 1905. Another straggler was found dead in Nova Scotia in March, 1897, three have been recorded from Long Island, New York, and two from Greenland.

That one bird of the present large migration should have been found with a ring adds greatly to the value of the present remarkable record, and this is due to the hard work of our ringers, who, by marking such large numbers, have made this chance possible. It is fitting that this bird should have been one of the record number ringed by Dr. Moon in 1926.

Many "ringers" have expressed their gratefulness to the "Marking Scheme" for having provided them with a pleasurable and educative occupation for hours and days they wished to devote to some kind of bird-work in the field, but, apart from this, the valuable scientific results, which have gradually accumulated as a consequence of this work, are certainly a still greater incentive to renewed and, we may hope, still more successful efforts in the future.

I would particularly draw my readers' attention to the proposed Census of Heronries referred to on another page of this issue, and the importance of ringing as many of these birds as possible during 1928.

NUMBER OF BIRDS "RINGED."

DR. H. J. MOON (2779), Messrs. A. W. Boyd (1741), A. Mayall (1674), Lord Scone (1356), Lt.-Col. G. P. Pollitt (1219), Messrs. W. and A. B. Duncan (1006), W. S. Jones (St. Edmund's School Nat. Hist. Soc.) (998), R. H. Brown (983), H. W. Robinson (666), P. E. A. Morshead (660), Mr. P. K. and Miss J. M. Chance (658), Mr. J. Bartholomew (529), Lon. Nat. Hist. Soc. (490), Mr. H. B. P. Kingham (429), Mr. and Mrs. R. O. Blyth (427), Mr. R. M. Garnett (423), Perthshire Nat. Hist. Soc. (379), Messrs. J. F. Thomas (307), T. L. Smith (277), H. G. Watson (271), Miss E. C. Sharp (245), Mr. T. Kerr (240), Oxford Orn. Soc. (226), Messrs. J. R. B. Masefield (206), E. Cohen (206), R. Carlyon-Britton (181), T. K. Craven (178), B. D. Nicholson (165), Mrs. T. E. Hodgkin (164), Miss F. K. Staunton (157), Mr. J. N. Fletcher (126), Rev. E. Peake (108), Messrs. W. D. Shaw (108), T. L. S. Dooly (98), Miss J. M. Ferrier (97), Mr. J. H. Methold (85), Dr. J. N. D. Smith (83), Messrs. H. S. Greg (76), A. P. Meiklejohn (76), Miss I. Mayne (73), Clifton College Scientific Soc. (72), Major W. M. Congreve (69), Wellington College (67), Messrs. R. E. Knowles (67), S. T. C. Turner (64), Miss L. W. Streatfield (60), Mr. and Mrs. W. P. G. Taylor (59), Messrs. C. F. Archibald (57), J. V. Stevens (55), Mrs. A. H. M. Garner (48), Messrs. F. J. Mitchell (47), F. Howard Lancum (46), H. S. Gladstone (43), G. Townsend (41), Major M. Portal (39), Messrs. A. H. R. Wilson (37), H. Went (37), Mrs. A. Mackenzie (37), Messrs. A. H. Greg (34), J. D. Clarke (33), Dr. N. H. Joy (31), Messrs. W. R. Philipson (31), E. P. Chance (29), Sir S. Bilsland (28), Messrs. J. F. Madden (25), Miss M. H. Greg (24), Messrs. D. J. Robertson (24), J. Vincent (24), R. H. Hellyar (21), and others who have ringed under twenty each.

NUMBERS OF EACH SPECIES "RINGED."

	'09-'20	'21	'22	'23	'24	'25	'26	'27	Total
*Crow, Carrion ..	22	16	11	18	59	37	41	46	250
Rook ..	251	17	6	94	24	166	175	253	986
Jackdaw ..	183	29	20	18	30	43	193	234	756
*Magpie ..	22	4	6	—	33	28	45	14	152
Jay ..	41	2	7	6	20	24	29	25	154
Starling ..	7187	411	454	736	738	866	1967	1324	13683
Greenfinch ..	2979	380	386	352	484	478	724	680	6463
*Goldfinch ..	10	20	12	10	19	5	6	1	83
Twite ..	45	1	—	1	16	—	—	5	68
Redpoll, Lesser ..	139	5	17	12	1	27	15	26	242
Linnet ..	1423	272	377	575	435	560	480	292	4423
Bullfinch..	235	52	23	63	62	55	94	38	622
Chaffinch..	3226	521	618	635	764	672	930	673	8039
Sparrow, House..	466	1	1	2	15	1	3	2	491
Sparrow, Tree ..	225	48	40	32	70	45	58	79	597
Bunting, Yellow	506	100	101	144	143	227	286	188	1695
Bunting, Reed ..	399	59	54	39	27	57	33	64	732
Lark, Sky ..	1819	63	64	61	114	44	100	118	2383
Pipit, Tree ..	245	34	42	57	72	60	176	98	784
Pipit, Meadow ..	1287	134	62	61	114	82	102	112	1954
Wagtail, Yellow..	111	26	19	20	14	44	53	15	302
Wagtail, Grey ..	114	11	25	37	34	58	22	63	364
Wagtail, Pied ..	767	124	112	130	243	252	124	247	2005
*Creeper, Tree ..	12	24	13	11	4	31	44	16	155
Tit, Great ..	799	31	18	23	20	37	16	32	976
Tit, Blue..	669	12	32	11	33	33	53	33	876
Tit, Coal..	103	3	—	1	2	—	—	7	116
Tit, Long-tailed..	41	—	—	5	1	—	2	2	51
Wren, G.-crested	42	1	—	7	22	47	30	21	179
Shrike, R.-backed	172	29	11	19	33	43	49	90	446
Flycatcher, S. ..	909	157	72	126	208	215	207	181	2075
*Flycatcher, Pied	6	43	13	1	14	63	72	127	339
Chiffchaff ..	89	68	25	22	50	42	79	15	390
Warbler, Willow	2078	284	274	402	436	454	742	573	5243
Warbler, Wood ..	132	71	59	80	86	77	142	71	718
Warbler, Reed ..	283	39	21	23	8	25	17	30	446
Warbler, Sedge ..	304	80	50	57	45	16	20	26	598
Warbler, Garden	181	55	42	56	100	52	73	21	580
Blackcap..	135	32	37	26	25	28	17	2	302
Whitethroat ..	587	179	133	177	138	245	589	138	2186
Whitethroat, L...	169	23	19	33	18	12	27	23	324
Fieldfare ..	85	—	—	—	—	—	1	—	86
Thrush, Mistle ..	661	77	103	171	139	185	127	159	1622
Thrush, Song	10339	1042	1052	1702	2600	2882	3027	3200	25904
Redwing ..	42	3	—	—	1	—	1	—	47
Ouzel, Ring ..	84	3	5	26	7	59	32	49	265
Blackbird ..	6062	918	920	1334	1985	1794	2158	2252	17423
Wheatear ..	203	75	155	83	97	103	121	108	945
Whinchat ..	466	17	30	69	49	40	145	97	913
Stonechat ..	136	5	25	56	27	66	33	52	400
Redstart..	236	135	76	102	58	134	163	63	967
Nightingale ..	70	19	20	19	18	23	33	40	242
Redbreast ..	3129	494	507	865	753	844	735	746	8073

	'09-'20	'21	'22	'23	'24	'25	'26	'27	Total
Sparrow, Hedge	.. 2070	246	221	409	463	487	462	492	4850
Wren ..	.. 814	265	133	321	331	343	213	212	2632
Dipper ..	.. 152	18	8	19	55	48	55	76	431
Swallow ..	.. 7597	382	821	889	1055	1173	1328	1378	14623
Martin ..	.. 1871	144	245	296	900	959	849	517	5781
Martin, Sand	.. 798	37	18	159	234	271	743	300	2560
*Swift ..	.. 6	27	72	37	87	57	59	51	396
Nightjar ..	.. 55	7	5	10	7	4	7	1	96
Wryneck ..	.. 212	8	8	2	20	13	28	12	303
Cuckoo ..	.. 124	20	16	22	20	23	30	32	287
*Owl, Little	.. 10	12	6	11	26	38	30	31	164
Owl, Long-eared	.. 32	10	12	7	—	12	3	8	84
Owl, Barn..	.. 81	14	2	13	5	15	19	10	159
Owl, Tawny	.. 125	15	14	14	18	52	35	47	320
*Merlin ..	.. 16	1	6	4	9	22	25	13	96
Kestrel ..	.. 59	12	3	20	28	63	93	48	326
*Buzzard ..	.. 2	11	3	2	8	12	6	11	55
Hawk, Sparrow	.. 67	4	9	19	21	26	19	17	182
Heron, Common	.. 111	—	6	14	21	38	19	97	306
Sheld-Duck	.. 71	1	—	4	—	6	1	4	87
Mallard ..	.. 645	41	58	180	281	127	477	588	2397
Teal ..	.. 149	—	1	—	135	148	313	38	784
Wigeon ..	.. 102	1	15	—	3	1	—	14	136
Duck, Tufted	.. 65	—	4	1	—	—	—	—	70
Cormorant	.. 563	—	—	—	8	—	23	2	596
Shag ..	.. 166	—	—	46	20	5	81	276	594
Gannet ..	.. 198	—	26	119	425	—	100	100	968
Shearwater, Manx	72	—	—	9	13	3	2	32	131
Wood-Pigeon	.. 212	33	26	61	181	184	202	168	1067
Dove, Stock	.. 57	26	7	15	19	16	35	16	191
Dove, Turtle	.. 81	9	12	13	19	35	84	57	310
Oystercatcher	.. 104	5	7	20	70	41	61	79	387
Plover, Ringed	.. 162	39	19	47	75	39	22	16	419
Plover, Golden	.. 49	4	1	2	5	12	1	7	81
Lapwing ..	.. 4158	220	345	358	597	778	1136	1694	9286
Sandpiper, C.	.. 221	10	24	37	44	4	40	55	465
Redshank ..	.. 311	25	26	32	39	46	78	104	661
Curlew, Common	.. 228	36	67	58	110	59	109	119	786
Snipe, Common	.. 220	19	18	8	50	31	40	183	569
Woodcock..	.. 365	8	31	28	57	84	273	414	1260
Tern, Sandwich	.. 762	30	77	153	92	421	148	225	1908
Tern, Common	.. 3998	706	2	44	425	632	882	227	6916
Tern, Arctic	.. 130	24	2	1	9	15	18	10	209
Tern, Little	.. 184	—	9	1	29	25	3	6	257
Gull, B.-headed	11961	5	—	—	3	—	11	54	12034
Gull, Common	.. 514	—	26	36	59	16	28	46	725
Gull, Herring	.. 512	6	9	20	43	19	146	166	921
Gull, L. Blk.-bkd	.. 3169	197	455	120	565	197	101	287	5091
Gull, G. Blk.-bkd	.. 78	—	2	3	33	35	28	20	199
Kittiwake	.. 84	—	43	86	15	—	15	15	258
Razorbill ..	.. 69	—	18	42	95	8	17	74	323
*Guillemot ..	.. 23	—	106	255	563	—	1	32	980
Puffin ..	.. 905	—	8	45	19	2	21	82	1082
Moor-Hen ..	.. 318	12	33	25	43	58	67	73	629

* Of species so marked no record was kept of the number ringed from 1913 to 1920.

SOME PERCENTAGES OF RECOVERIES.

Species.	Number Ringed 1909-26.	Number of these Recovered to date.	Percentages of Recoveries
Rook	733	19	2.5
Starling	12,359	592	4.7
Greenfinch	5,783	81	1.4
Linnet	4,131	29	0.7
Chaffinch	7,366	111	1.5
Yellow Bunting	1,507	60	3.9
Reed-Bunting	668	2	0.2
Sky-Lark	2,265	20	0.8
Tree-Pipit	686	2	0.2
Meadow-Pipit	1,842	22	1.1
Pied Wagtail	1,758	31	1.7
Spotted Flycatcher	1,894	5	0.2
Willow-Warbler	4,670	28	0.5
Whitethroat	2,048	9	0.4
Mistle-Thrush	1,463	26	1.7
Song-Thrush	22,704	277	1.2
Blackbird	15,171	348	2.2
Wheatear	837	20	2.3
Whinchat	816	6	0.7
Redstart	904	3	0.3
Redbreast	7,327	304	4.1
Hedge-Sparrow	4,358	150	3.4
Swallow	13,245	96	0.7
Martin	5,264	39	0.7
Sand-Martin	2,260	7	0.3
Swift	345	18	5.2
Cuckoo	255	10	3.9
Tawny Owl	273	21	7.6
Kestrel	278	25	8.9
Sparrow-Hawk	165	28	16.9
Heron	209	30	14.3
Mallard	1,809	311	17.1
Teal	746	61	8.1
Cormorant	594	106	17.8
Shag	318	31	9.7
Gannet	868	30	3.4
Wood-Pigeon	899	36	4.0
Ringed Plover	403	4	0.9
Lapwing	7,592	222	2.9
Common Sandpiper	410	2	0.4
Redshank	557	27	4.8
Curlew	667	29	4.3
Snipe	386	30	7.7
Woodcock	846	75	8.8
Sandwich Tern	1,683	15	0.8
Common Tern	6,689	105	1.5
Black-headed Gull	11,980	526	4.3
Common Gull	679	17	2.5
Herring-Gull	755	21	2.7
Lesser Black-backed Gull	4,804	187	3.8
Guillemot	948	16	1.6
Puffin	1,000	1	0.1

AN EARLY WORK ON BIRD-MIGRATION.

BY

HUGH S. GLADSTONE, M.A., M.B.O.U.

WHAT has been described as "the earliest treatise on migration published in this country" ⁽¹⁾ is a rare duodecimo tract of fifty pages issued anonymously in 1703. Its scope is fully indicated in the title-page, which is as follows:—

AN/ESSAY/Towards the/Probable Solution/OF THIS
/QUESTION./WHENCE come the *Stork* and the *Turtle*,
the *Crane* and the *Swallow*,/ when they Know
and Observe the /appointed Time of their Coming./OR/
WHERE those Birds do probably make/their Recess
and Abode, which are/absent from our Climate at some
cer-/tain Times and Seasons of the Year./ By a Person
of Learning and Piety./LONDON,/ Printed for Samuel
Crouch, at the Corner/ of *Pope's-Head-Alley*, over against/
the *Royal-Exchange*./ 1703.

"A second edition," entitled as above ⁽²⁾ and also published anonymously, appeared in 1739, but runs to forty-eight pages instead of fifty.

The authorship of this anonymous tract has been attributed to the "Hon. Francis Roberts, Esq."—on what authority is not revealed—by Thomas Tonkin ⁽³⁾ and this conclusion is accepted by Messrs. Mullens and Kirke Swann. ⁽⁴⁾

There is no need to deal with the "probable solution" here propounded that migratory birds retreat to the moon to spend the cold season; this extraordinary theory has often been a matter of comment—if not of ridicule—by many writers, and it is the propounder of this view—rather than his proposition—that forms the subject of these notes.

When reading Mr. Lewis R. W. Loyd's latest book my attention was arrested by a reference he makes therein ⁽⁵⁾

(¹) *The Zoologist* : 1909 : p. 71.

(²) The title is the same but is differently spaced : this edition was *Printed for E. Symon, over against the Royal Exchange, Cornhill, 1739.*

(³) *Carew's Survey of Cornwall* ; . . ed. by the late Thomas Tonkin ; 1811. p. 83 (footnote).

(⁴) *A Bibliography of British Ornithology* : 1917 : p. 491.

(⁵) *Bird Facts and Fallacies* [N.D. 1927.] : p. 220 (quoting *The Folk Lore and Provincial Names of British Birds* : by Rev. Charles Swainson : 1886 : p. 191).

to a tract in *The Harleian Miscellany*. On the first opportunity I verified his reference⁽¹⁾, when it at once became apparent that the tract referred to by him is the same as that attributed to the "Hon. Francis Roberts, Esq." It is entitled—or rather described—as:—

"An Enquiry into the Physical and Literal Sense of that/ Scripture,/ Jeremiah viii. 7./ 'The Stork in the Heaven knoweth her appointed Times : and the Turtle, and the Crane, and the Swallow, observe the/Time of their Coming ; '&c./ Written by an eminent Professor, for the Use of his Scholars ;/ and now published at the earnest Desire of some of them./ Printed by J.H. no Date. [Duodecimo, containing Thirty-six Pages.]"

The text commences:—"The whole place is a rebuke to Man" . . . with which words the 1703 pamphlet also begins and thereafter both it and the version given in *The Harleian Miscellany* are practically word for word alike. There is, however, an important—and illuminating—difference in *The Harleian Miscellany* version where before the "postscript" [on p. 48 of the 1703 edition where no signature is appended] there are added the words "Your Friend, C.M." Who "C.M." was is made clear in a footnote, to the word "Professor" in the title, which reads:—"Mr. Charles Morton. See Calamy's Continuation, Vol. I., p. 211." Here⁽²⁾ it is definitely stated that, besides "several other Treatises," Charles Morton wrote "An Enquiry into the Physical and Literal Sense of Jeremiah viii. 7. *The Stork in the Heaven*, etc." and in an earlier work Edmund Calamy⁽³⁾ gives the following biography of the author:—

"Mr. Charles Moreton [*sic.*], M.A. He was Grandson by his Mother's side to Mr. Kestle of Pendavy in this County [Cornwall], and born in

(1) *The Harleian Miscellany* : Vol. II. : 1809 : pp. 578/588.

(2) *A continuation of the account of the Ministers, Lecturers, Masters and Fellows of Colleges, and Schoolmasters, who were Ejected and Silenced after the Restoration in 1660, by or before the Act of Uniformity* . . . by Edmund Calamy : Vol. I., 1727, p. 211.

(3) *An account of the Ministers, Lecturers, Masters and Fellows of Colleges and Schoolmasters, who were Ejected or Silenced after the Restoration in 1660* . . . by Edmund Calamy : second edition, Vol. II., 1713, pp. 144/5. (This appears to be the second volume of *An Abridgement of Mr. Baxter's History of his life and times* : by Edmund Calamy, second edition [in two volumes], 1713.)

his House about the year 1626. His Father was Mr. Nicholas Moreton, who was forc'd to quit the very same Rectory [Blisland] for Non-conformity in the Reign of King Charles I., after which he came to be Minister of St. Mary Overy's in Southwark, where he dy'd. This Mr. Nicholas Moreton descended from an Ancient Family at Moreton in Nottinghamshire, the Seat of Thomas Moreton, Secretary to King Edward III. about 400 years since. Mr. Charles Moreton was his eldest son; and he had Two more that were also Ministers. At about Fourteen Years of Age, his Grandfather sent him to Wadham-College in Oxon, where he was very Studious; and at the same time Zealous for the Rites and Ceremonies of the Church of England, after the example of his Grandfather who was a great Royalist. When the Civil Wars came on, he observing that they who were most Debauch'd generally sided with the King, against the more Vertuous Part of the Nation, which generally Affected the Parliament Side, was much startled to find the best Men on that which he thought the worst Side, and the vilest Men on that Side which he thought the best: He thence began to apply himself Seriously to the Controversy between the Prelatist and Puritan; and after mature Deliberation determin'd to fall in with the latter. While he was Fellow of the College, he was extremely valu'd by Dr. Wilkins the Warden, on the account of his Mathematical Genius. He was indeed a General Scholar, but his Eminency lay in the Mathematicks. When he left the College, he was fix'd [1655] in the Exercise of his Ministry in his Native Country in this Place [Blisland]; and here he liv'd Comfortably several Years. After his Ejectment by the Act of Uniformity, he liv'd in a small Tenement of his own in the Parish of St. Ives, and preach'd privately to a few People of a Neighbouring Village, till the Fire of London. Having sustained great loss by that, he remov'd thither to take care of his Affairs. Being there, he, by the Intreaty of several Friends, was prevail'd with to undertake the instructing of Youth in Academical Learning. He set upon the Work at Newington-Green, and was extraordinarily well qualify'd for it. Many of his Pupils are now very Useful Men, both in Church and State. Some Scores of young Ministers were Educated by him, as well as many other good Scholars.⁽¹⁾ He had indeed a Peculiar Talent, of winning Youth to the Love of Virtue and Learning, both by his Pleasant Conversation, and by a Familiar Way he had of making difficult Subjects easily Intelligible. After about Twenty Years continuance in this Employment, he was so infested with Processes from the Bishop's Court, that he was forc'd to desist. At the same time, being under great Fears as to the Publick, he, in 1685, went over to New-England, and was chosen Pastor of a Church at Charlestown, over-against Boston, where he dy'd in a good Old Age, being near Fourscore.

He was of an Healthy Constitution, of a Sweet Natural Temper, and of a Generous Public Spirit: an Indefatigable Friend, a Pious, Learned, Ingenious, Useful Man; belov'd and valu'd by all that knew him."

It is certainly remarkable here that his erstwhile preceptor—John Wilkins—should himself have possessed strong opinions as to the habitability of the moon. In 1638 he published

⁽¹⁾ [Among his more famous pupils may be mentioned Daniel Defoe, John Shower, Samuel Lawrence and Thomas Reynolds.]

The Discovery of a World in the Moone. Or, a Discourse tending to prove that 'tis probable there may be another habitable World in that Planet, and in 1640 "The third impression. Corrected and enlarged" of this work appeared; to which he added *a Discourse concerning the possibility of a Passage thither*. John Wilkins (b. 1614, d. 1672) is best known as a Parliamentarian Ecclesiastic who, at one time, was Bishop of Chester. He was one of the founders of the Royal Society and was a fairly profuse author. It is known that in the compilation of his *Essay towards a real character, and a philosophical Language*, 1668, he was favoured with the assistance of John Ray and Francis Willughby. In this work there appears a list of birds (pp. 144-156) which—though more meagre in detail—must be held to antedate the oft-quoted *Ornithologia* of Francis Willughby, which was not published till 1676, and also the less-known *Collection of English Words*, by John Ray (in which "A catalogue of English Birds" appears on pp. 81-96: and references thereto occur on pp. [xii-xiv] and 57, 59, 63, 68, 80, 132, 178), which was first published in 1674. In the "Corrected and enlarged" edition of his work dealing with the habitability of the moon, above cited, Wilkins submits various propositions to prove this theory and he even suggests "that 'tis possible for some of our posteritie, to find out a conveyance to this other world; and if there be inhabitants there, to have commerce with them,"⁽¹⁾ and he adds

"Having thus finished this discourse, I chanced upon a late fancy to this purpose under the fained name of *Domingo Gonsales*, written by a late reverend and learned Bishop [who] supposeth that there is a naturall and usuall passage for many creatures betwixt our earth and this planet He supposeth the Swallowes, Cuckoes, Nightingales, with divers other fowle, which are with us only halfe the year to flye up thither, when they goe from us. Amongst which kinde, there is a wilde Swan in the East Indies, which at certain seasons of the year doe constantly take their flight thither. Now this bird being of great strength, able to continue for a long flight, as also going usually in flocks, like our wilde-geese; he supposeth that many of them together, might be taught to carry the weight of a man."⁽²⁾

The book referred to by Wilkins is *The man in the Moone: or a discourse of a voyage thither by Domingo Gonsales*. The writer of this work was Francis Godwin (b. 1562, d. 1633), Bishop of Hereford, who has been described as an "incomparable historian" and it was not published—"with an epistle

(1) *The Discovery of a new world*: 1640: Vol. I., p. 203.

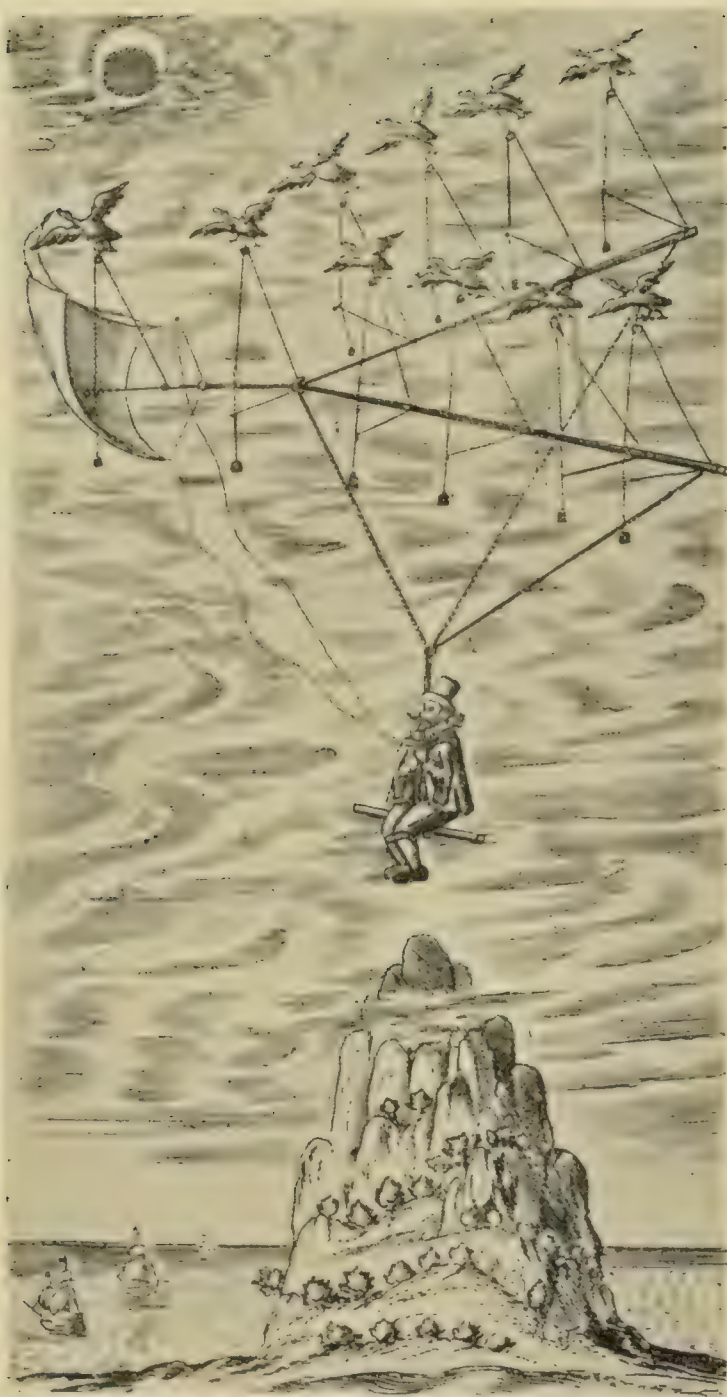
(2) *Loc. cit.*, pp. 240/241.

to the reader subscribed E.M."—till 1638,⁽¹⁾ five years after his death. The author—very properly—describes it as "an essay of Fancy" in which he gives an account of a supposed trip to the moon, in 1601, by the aid of trained swans (curious wild birds with one foot webbed like a swan, the other with talons like an eagle and preying partly on fish and partly on fowl) and a plate is added showing the daring aviator setting forth on his journey attached to a flock, or party, of these birds. (See plate.) It can, however, hardly be supposed that Wilkins could have believed in the possibility of a human being ever reaching the moon by these means though, from his writings, it does not appear that he regarded it as improbable that certain species of birds did migrate to the moon. It is not the object of these notes to determine who originated this idea; in many primitive and ancient religions souls were identified with birds and certain of the ancients believed that souls resorted to the moon. Among the Red Indians, and several South African tribes, there are not a few legendary stories based on intercommunication between the Moon and the Earth. It has been claimed for Bishop Godwin's book that it inspired Cyrano de Bergerac's *Histoire comique . . . de la Lune*, 1657;⁽²⁾ Jonathan Swift's *Gulliver's Travels*, 1726; Raspè's *Adventures of Baron Munchausen*, 1786; and other similar fantasies, but it would seem highly probable that the *Vera historia* of Lucian (*fl.* 160–190) was the common origin, or basis, of them all.

Returning again to the original, and legitimate, subject of these notes, it only remains to add that Charles Morton duly figures in the *Dictionary of National Biography* as a Puritan divine (*b.* 1627, *d.* 1698), but that his name therein is spelled, probably after due consideration, Morton without an e. The date of the first publication of the tract under discussion is not known, but it must have been written before 1698 and probably prior to his departure for America in 1685. In any case, with the evidence before us, we must now deprive

(1) This book must have enjoyed considerable popularity; there was, for example, another English edition in 1768; French editions in 1648, and 1671; and German editions in 1659, and 1660.

(2) It must be noted that Cyrano de Bergerac's hero actually met Domingo Gonsales in the moon and that—being regarded as inferior pigmies, of opposite sexes, by the gigantic four-footed Lunars—they were caged together in the hope that they might breed! A fanciful conception worthy of the Gallic wit of the author whose *jeu d'esprit* has been summarized as "the greatest fantastic voyage in French literature."



[DOMINGO GONSALES ON HIS WAY TO THE MOONE.]

the "Hon. Francis Roberts, Esq." of the honour of its authorship ; moreover, not only is the stigma of anonymity entirely removed from this tract but the veil of reticence, enshrouding the author under the initials "C.M.", is also drawn aside to reveal Charles Mor[e]ton as the author of what is perhaps "the earliest treatise on migration published in this country."

NOTES

THE 1927 IRRUPTION OF THE CROSSBILL*.

SCANDINAVIA.

PROFESSOR DR. EINAR LÖNNBERG has very kindly sent me some evidence to show that the irruption of Crossbills had its origin somewhere to the east of Sweden. From the beginning to about the middle of July, flocks of from ten to thirty were observed to be continually passing about 50 miles south of Stockholm and about 25 miles from the coast. The direction of these flocks was always to the north or north-west, and it was impossible that all these birds could have originated in the narrow strip of country between this point and the Baltic. A further fact in favour of a more eastern origin is that several *Loxia leucoptera bifasciata* were caught a little south of Stockholm in August, September and October. Mr. H. T. L. Schaaning also reports (*Norsk. Orn. Tidss.*, VIII., p. 45) the presence of *L. l. bifasciata* in Norway, among the large flocks of Common Crossbills which overran that country from Finmark to Jäderan: at Florö (Nordfjord) in October and near Oslo from August to September. It is rather remarkable that we have not had this species reported in the British Islands during the present irruption.

Professor Lönnberg informs me that in 1926 *L. l. bifasciata*, which is on the whole rather sporadic with them, bred in great numbers in south-western Lapland. In the same season *Loxia curvirostra* also bred there in great numbers.

The invasion of the Common Crossbill has also extended all over Denmark from the island of Bornholm in the Baltic to the west coast of Jutland.

H.F.W.

NORTH SEA.

CROSSBILLS having been reported in *British Birds* from almost all over England, it would perhaps be interesting to give some notes and observations made of the invasion from a somewhat different point, *i.e.*, the North Sea.† During the past summer a great number of these birds have been passing over to England and many have alighted for various reasons on ships at sea.

My first record is of a solitary immature bird on July 8th, the weather at that time being foggy, the wind E.N.E. and our position 54° 40' N. lat., 4° 40' E. From then on

*For previous notes see *antea*, pp. 90-3, 121-7, 153-5, 175-7, 195-6.

†For previous notes from the North Sea *vide antea*, p. 123.

birds were seen almost every day, arriving in small parties of three or four—mainly consisting of immature birds. From my own observation the ratio of immature to mature was about eight to one ; while that of adult hens to cocks was three to one.

Six birds were captured and kept aboard for some eighteen days, the party consisting of one adult cock, one adult hen and four young birds. The cock was in full red plumage, while the hen was of the yellow rather than green type. The young were, when first caught, of a uniform brown hue, varying only in depth of colour, some being much darker than others. But, subsequently, the commencement of the adult plumage began to show, and it was evident before they were liberated that three of the four would develop along the green and yellow stages ; whilst the other appeared to be assuming the red dress of the adult male direct from the brown stage.

Crossbills appear to be quite the easiest birds to tame that I have ever met, as they evince no objection to captivity, climbing about the cage exactly like so many parrots, and never struggling or madly attempting to escape as do all other species. Their food consisted at first (*faut de mieux*) of coarse oatmeal and boiled haricot beans. This diet did not seem to suit them well, and there were several casualties, the cause of death being a form of diarrhœa. Subsequently, a supply of canary seed was obtained and the birds thrived and grew fat on it. Unfortunately the supply ran out before the birds could be brought ashore and so they were liberated.

I append herewith a rough table showing dates, numbers and details of birds observed, and the wind and weather.

Date 1927	No. of Birds			Position		Wind, etc.
	Cocks	Hens	Imm.	N.	E.	
July 8	—	—	1	54° 40'.	4° 40'.	E.N.E., foggy
" 9	—	—	2	54° 50'.	4° 45'.	do., no fog
" 10	—	—	2	55° 0'.	5° 50'.	Calm
" 11	—	1	5	54° 45'.	6° 0'.	do.
" 12	—	—	3	54° 40'.	6° 5'.	do.
" 13	—	—	1	do.		E. by S.
" 14	1	2	26	54° 50'.	5° 30'.	Calm and overcast
" 15	1	—	2	55° 5'.	4° 50'.	N.N.E., foggy
" 16	—	1	8	do.		do.
" 17	—	—	1	55° 15'.	4° 45'.	do.
" 20	—	1	10	55° 20'.	4° 25'.	N. by W.
" 23	—	1	3	55° 10'.	4° 10'.	N.N.W.
Aug. 4	—	—	2	54° 35'.	4° 50'.	Calm
Sep. 22	—	1	6	56° 10'.	4° 5'.	N.N.W., strong wind

D. R. WOLFE MURRAY.

ENGLAND AND WALES.

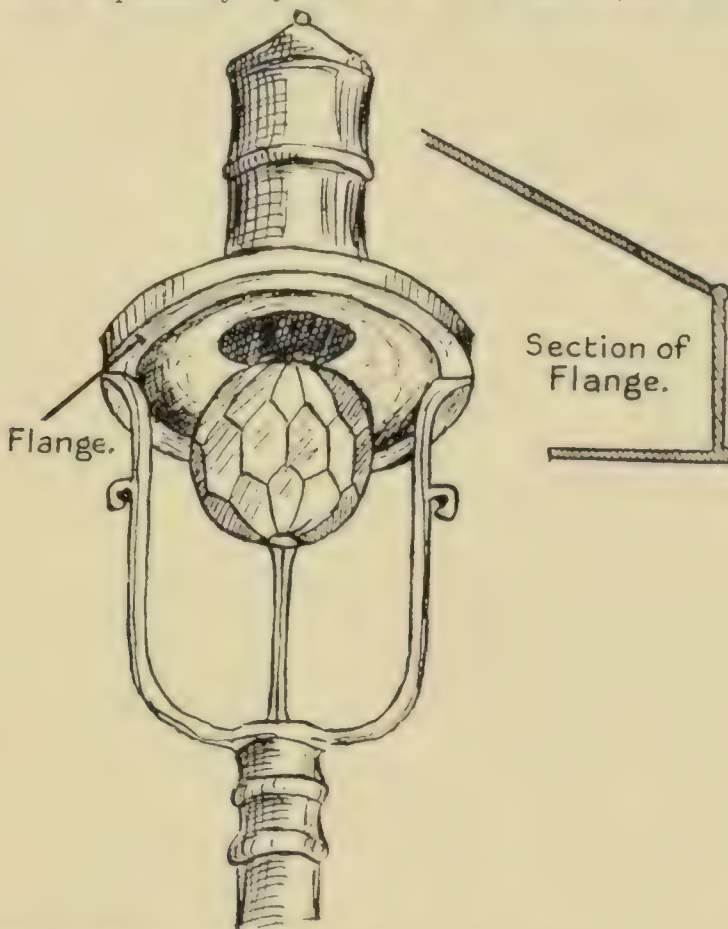
CHESHIRE.—On August 2nd and 4th Mr. H. G. Attlee saw five near the source of the River Goyt.

SUSSEX.—From September 4th to 13th the same observer saw small numbers at or near St. Leonards.

GLAMORGANSHIRE.—In the last week of July Miss E. C. Ware saw a small party near Caerphilly. Two of these were noted as feeding on insects on leaves of a blighted plum tree.

HOUSE-SPARROWS ROOSTING IN A LAMP.

I wish to call your attention to an ingenious habit of the House-Sparrow (*Passer d. domesticus*). On a number of occasions in November and December, 1927, observations were made separately by Mr. C. F. A. Pantin, of the Marine



Biological Laboratory, and myself, on Plymouth Hoe. The Hoe is illuminated at night by a score or so of powerful electric lamps, each surmounted by what was once a reflector. Round the lower edge of the reflector, as will be seen by the attached diagram, is an inwardly projecting flange about 3 ins. deep.

Our attention was independently attracted by twitterings, and we both discovered a large number of Sparrows roosting on this flange in the comfortable warmth of the lamp. They are in complete obscurity until a quarrel disturbs the whole lot, and they fly out round the lamp. Occasionally, a tail may be seen projecting, so that presumably they face away from the light.

I examined other lamps, but was unable to find Sparrows roosting in any but that which occupies the centre of the Hoe. Mr. Pantin also observed them in that lamp, and informs me that all the other ones observed are extinguished at 11 p.m., only the central one remaining alight all night!

V. C. WYNNE-EDWARDS.

LESSER WHITETHROAT IN NORTH DEVON.

DURING June, 1920, I found four males of this species (*Sylvia c. curruca*) in full song constantly near Georgeham, Braunton, Arlington Court and Coxleigh Wood, and was convinced that they were summer-residents there; I believe this is a rare species in the district.

HUGH G. ATTLEE.

BLACK REDSTART IN CARMARTHENSHIRE.

On December 24th and 30th, 1927, I saw a Black Redstart (*Phœnicurus o. gibraltariensis*) on the coast near Laugharne. By January 3rd, 1928, it had moved two miles and was then stationed among some sandhills. The white wing-bar was very faint.

J. F. THOMAS.

BROODS OF SWALLOWS AND MARTINS IN SUSSEX IN 1927.

In reference to the notes by Lord Scone (*antea*, p. 156) and Mr. R. H. Brown (*antea*, p. 178) on the broods of Swallows and House-Martins, I find that near Rye, in 1927, seven pairs of Swallows reared two broods and one pair, three. Two pairs of House-Martins reared three broods, and seven pairs reared two. Nesting did not seem later than usual, a Swallow's nest being found on May 14th with two eggs.

	Nests containing				Total Examined	Average Brood
	6	5	4	3		
Swallow ...	2	3	6	0	11	4.6
House-Martin...	0	3	6	3	12	4.0

D. D. GODFREY.

SNIPE AND COMMON SANDPIPER AS FOOD OF
KESTREL.

ON June 10th, 1927, I examined a "larder" of a Kestrel (*Falco t. tinnunculus*) in an old Crow's nest containing five young birds (differing much in size) and one addled egg. The interesting items were the bastard-wing (and part of the primary-coverts) of a Snipe (*Capella g. gallinago*) and the complete leg and foot of a Common Sandpiper (*Tringa hypoleucos*). I am not aware that the Kestrel has been known to take Snipe (this was close to a boggy moor near Matlock where Snipe bred), or Sandpiper. HUGH G. ATTLEE.

[The Snipe is given under birds occasionally taken in the *Practical Handbook*, II., p. 123.—EDS.]

WHITE STORK SEEN IN SOUTH-WEST SCOTLAND.

IN the Dutch ornithological journal, *Ardea*, Vol. XVI., pp. 134-5 (1927), Heer Piet Lels states that while travelling on the Midland (L.M. & S.) Railway from Glasgow on July 20th, 1927, about half an hour's run south of Symington, he saw a White Stork (*Ciconia ciconia*) flying round in a wide grassy valley intersected with small watercourses or drains. When returning next day by the same route the bird was nowhere to be seen. Mr. H. S. Gladstone kindly informs me that in all probability the locality in question lies near Elvanfoot in Lanarkshire, the source of or confluence of the small streams which go to form the Clyde. By a slip of the pen in the heading of the original report it is described as in N.W. England.

Heer Lels is familiar with the White Stork, which breeds in his garden in Holland, so it is unlikely that he was mistaken in his identification. F. C. R. JOURDAIN.

WHOOPER SWAN IN SHROPSHIRE.

A PAIR of Whoopers (*Cygnus cygnus*) paid a visit to Betton Pool, a large sheet of water three miles south of Shrewsbury, at Christmas, 1927. They were first seen by the keeper there on Christmas Day, and, although very wild, stayed there three days. Alarmed by a shooting party on December 28th, they rose from the water trumpeting loudly, and flew right away in a S.E. direction. Their long yellow bills, with no black at the base, were specially noticeable. It is over thirty years since the Whooper was last recorded in Shropshire, though during that period several parties of Bewick's Swan have visited the county. H. E. FORREST.

WHITE-FRONTED GEESE INLAND IN CHESHIRE,
STAFFS. AND NORTHANTS.

ON October 16th, 1927, Mr. F. N. Peak and I saw three White-fronted Geese (*Anser albifrons*) at the most westerly of the large Staffordshire reservoirs, where I saw one on January 2nd, 1924 (*Brit. Birds*, Vol. XVIII, p. 241); they flew round for a time, showing clearly the black bars on the under parts and the white brows, and finally disappeared in the east. On December 18th, 1927, during a keen frost, I saw two White-fronted Geese rise from the side of Marbury Mere, near Northwich, Cheshire, and fly off to some meadows, whence they returned to the mere later in the day.

Again, I am told by Mr. A. G. Haworth that on January 8th, 1928, he had a good view of six of this species at Tatton Mere, Knutsford, Cheshire, both in flight and on the water.

The White-fronted Goose is perhaps the most prone of the Grey Geese to visit inland localities. Mr. Kenneth Fisher tells me that the great majority of the Geese that visit the valley of the Nene, near Oundle, in Northants, each winter, are of this species. On December 26th and 27th, 1927, he took me to see the Geese that were then feeding in the flooded meadows; on the second day we saw from 60 to 70 White-fronted Geese and with them some half-dozen Pink-footed Geese (*Anser brachyrhynchus*) and possibly a Bean Goose (*Anser fabalis*) or two, though we did not identify the last named with certainty.

A. W. BOYD.

WHITE-FRONTED GEESE IN SHROPSHIRE.

ON December 23rd, 1927, a gaggle of about thirty White-fronted Geese (*Anser albifrons*) passed over a reach of the Severn at Atcham, near Shrewsbury. They were flying in V formation northwards. Throughout the last half of December there were large numbers of ducks on the Severn here, including besides Mallard and Teal, Pochard, Tufted Duck, and Wigeon; several of the last named were males in remarkably bright plumage.

H. E. FORREST.

GADWALL IN SHROPSHIRE.

ON December 21st, 1927, while Mr. C. W. Dodson was waiting at a pool near Bishop's Castle for Mallard, three ducks flew over, one of which he shot. Being unable to identify it he took it to Dr. J. H. Lamb, who found that it was an adult male Gadwall (*Anas strepera*). He reported it to me, as the species is rare in this district. The weather was severe at the time. I see that in *Trans. N. Staff. Field Club*, Mr.

A. W. Boyd records two pairs on the westernmost of the Staffordshire Reservoirs, May 21st, 1927. This is not far from the Shropshire border. H. E. FORREST.

RED-CRESTED POCHARD IN CO. CORK.

While flight shooting for duck on the evening of December 29th, 1927, at Reendonogan Lake, at the head of Bantry Bay, co. Cork. I shot a fine male Red-crested Pochard (*Netta rufina*). I sent the bird to Messrs. Williams & Son, Dublin, for mounting and they confirmed the identification.

I may add that Reendonogan Lake is just divided from the sea by a narrow strip of land, on which I was standing on the look out for duck. The bird came by itself in from the sea. Of course all Pochards are mostly freshwater duck, but, as there were some people shooting on the Lake early in the day, this bird was probably frightened out of it and I happened to get it on its way back.

According to Ussher (*Birds of Ireland*), only one was ever obtained in Ireland, and that was shot near Tralee during a very severe winter (1881). J. E. FLYNN.

EIDER IN KENT.

It may be of interest to record my observation of an Eider (*Somateria mollissima*) on January 3rd, 1928, off the coast of Kent, at Hythe. I had seen many Eiders, previously, off Bamburgh, Northumberland, and also a flock off the S.W. coast of Scotland, when watching with the Duchess of Bedford, on one occasion. Consequently, the moment that I observed a duck with much white plumage, and with the long, dark, narrow face-marking which gives an expression all its own to the Eider, I felt sure of its identity. I confirmed it by noting the exact area of the white on the cheeks, neck and upper back; the dark wing, cut by a conspicuous band of white; dark tail; and (when it raised itself in the water to shake) the dark lower breast.

A. V. STONE.

GOOSANDERS IN LONDON.

In the first week of January, 1928, Mr. J. Hinton, keeper of the birds in St. James's Park, noticed on the water two strangers which proved to be Goosanders (*Mergus m. merganser*). These birds at once took courage from the conduct of the tame water fowl and made themselves thoroughly at home. They have often been seen fishing, even in the very narrow part of the lake, regardless of the passers-by.

On January 12th I saw a Goosander on the Serpentine in Hyde Park on the east side of the island, just where I had long expected to find Goosanders, and had looked for them almost every morning for the last six winters. This bird, which was also seen by Mr. R. W. Hayman, did not venture near the banks and did not stay long.

There appear to be no previous records of the occurrence of this species in central London; but, judging by what has recently happened elsewhere, it seems likely that these visits will be followed by others. A. HOLTE MACPHERSON.

GANNET DIVING FROM SURFACE OF WATER.

ON August 6th, 1927, I was overlooking a creek at Scapa Flow and saw an adult Pomatorhine Skua (*Stercorarius pomarinus*) attacking an adult Gannet (*Sula bassana*) which seemed gorged and somewhat inactive. At successive efforts to escape on the wing the aggressor got above, and descended almost upon the victim's back, driving it down to the water where it sat quiescent whilst its enemy hovered close above it. When, however, the Skua let down the full length of its legs and talons to within an inch of its back, the Gannet dived. On rising it was again attacked in the same manner and again dived. This performance was repeated about four or five times close below the parapet of the road on which I was walking. The action in diving seemed less vigorous than the leap upward and turn-over of a Shag, but was quite effective. This is the only time I can recall seeing a Gannet dive from the surface. When taking sand-eels close inshore in Carbis Bay, St. Ives, in extremely shallow water (say twenty-four inches), Gannets will circle close above the water and plunge in their normal, headlong manner, taking no harm. H. M. WALLIS.

BLACK-THROATED DIVER IN CO. GALWAY.

A BLACK-THROATED Diver (*Colymbus a. arcticus*) was shot near Eyrecourt, co. Galway, on December 29th, 1927. The back and wing had traces of the summer plumage, otherwise the bird was in full winter. Black-throated Divers are very rare visitors to Ireland. W. J. WILLIAMS.

GREY PLOVER, LITTLE AUK AND RED-THROATED DIVER IN STAFFORDSHIRE.

THE recent severe weather has brought three northern birds to our county :—

(1) A Grey Plover (*Squatarola squatarola*) was caught

by Mr. D. P. Taylor in his garden at Oulton Heath, near Stone, Staffordshire, on the evening of November 20th, 1927. It survived some days, but eventually died. This is the first authentic record with data of the occurrence of this species in north Staffordshire, but it has been observed several times on the shores of large reservoirs in the south of the county.

(2) A Little Auk (*Alle alle*) was picked up dead near Cheadle, Staffordshire, on December 27th, 1927.

(3) A Red-throated Diver (*Colymbus stellatus*) was found exhausted, but still alive, in the town of Stone, Staffordshire, about 4 a.m. on January 2nd, 1928. It was fed, but only survived two days, and was found to have been injured internally, probably by telegraph wires or in its fall.

It may be interesting to note that our Staffordshire list of birds contains records of almost all our rarer stragglers, as several of the flight lines of both summer and winter migrants cross our county.

JOHN R. B. MASEFIELD.

GREAT SKUA TURNING GANNET OVER IN THE AIR.

BETWEEN Hermaness and the Muckle Flugga Rock on July 4th, 1927, was witnessed the following incident:—It was a day of brilliant sunshine and crystal clear atmosphere, and the writer and his wife were on the Motor Relief Boat of the Muckle Flugga Lighthouse Station, about half a mile from the rock, when a Gannet (*Sula bassana*), in full adult plumage, was seen to dive and rise to a height of approximately 60 ft. on its way back to the Gannetry. Meanwhile, a Great Skua (*Stercorarius skua*), having observed the successful exploit, swooped down from an altitude of some 40 ft. immediately in its wake, flattened out and upsoaring with momentum, seized the tail-feathers of the Gannet and turned it rump over head. The Gannet, with a loud note of alarm, when almost upside down disgorged the fish so recently swallowed, and the Bonxie, having overshot its victim, turned, and nose-diving, caught the fish before it reached the water. Both birds flew off as though nothing untoward had happened. The whole episode was clearly seen by two observers at 200 yds. range. When the comparative sizes and weights of the two birds are considered, the courage and ingenuity of the Skua will be appreciated.

J. W. S. CLOUGH.

WAXWINGS IN ENGLAND AND IRELAND.—Mr. W. S. Medlicott writes that he saw a *Bombycilla garrulus* near Goathland on December 26th, 1927. It was feeding on

hawthorn berries. Mr. K. C. Crosbie reports (*Field*, 19-1-28, p. 80) one found dead in Upper Wharfedale on December 29th. Miss B. C. Paterson informs us that she and Miss Brown saw two Waxwings on January 2nd, 1928, near Stocksfield, Northumberland. Mr. Henry B. Rathbourne reports that a Waxwing was picked up dead during Christmas week, 1927, on Boa Island, Lower Lough Erne, co. Fermanagh.

LATE SWALLOW AND MARTIN IN CARMARTHENSHIRE.—Miss E. Falkener reports (*Field*, 12-1-28, p. 67) the presence of a Swallow (*Hirundo rustica*) at Laugharne on December 12th, 1927, and of a *Delichon urbica* on December 7th.

SPOONBILLS IN DEVONSHIRE.—Mr. V. H. Dand states (*Field*, 5-1-28, p. 23) that nine *Platalea leucorodia* visited the estuary of the Axe on September 28th, 1927, and stayed three days.

BITTERNS IN ENGLAND AND WALES.—Perhaps a rather unusual number of *Botaurus stellaris* occurred in December, 1927, and January, 1928. Mr. Owen Wynne tells us of three near Exeter during the hard weather in December. One is reported from Cornwall at the end of December, another from Sussex on January 7th, and two from Carmarthenshire (*Field*, 19-1-28), while Mr. T. W. Harrison tells us of one at Chilbolton, Hants, in January.

COMMON SCOTER IN LONDON.—Mr. D. Seth-Smith informs us that a specimen of *Oidemia n. nigra* was captured alive at Primrose Hill on December 29th, 1927.

LEACH'S FORK-TAILED PETREL IN SURREY.—Mr. D. Seth-Smith informs us that a specimen of *Oceanodroma l. leucorhoa* was captured alive in a snow-drift at Dorking on December 27th, 1927. It died two days later and was sent to Mr. Seth-Smith for identification.

COCK PHEASANT INCUBATING.—Mr. H. M. Prichard informs us that one of the keepers on the Penrice Castle Estate, Reynoldston, Glamorganshire, found a cock Pheasant (*Phasianus colchicus*) sitting on four eggs among bracken. Next day the bird was again found on the eggs and continued to brood them till they were hatched out. For more than a week afterwards he was observed mothering the chicks, but afterwards was lost sight of. Such cases, though uncommon, have been recorded on a good many occasions, and are not due to hen birds assuming the male

plumage as might be suspected. It would be interesting to examine the generative organs of a male which has exhibited this extraordinary trait. In *Brit. Birds*, X., p. 69, the late Mr. Heatley Noble records a case in which a cock had hatched off a brood of seven eggs, and references will be found to six notes on the subject in the *Field* and also to a photograph of an incubating cock which appeared in *Country Life*, June 30th, 1906, in an editorial note appended to Mr. Noble's record.

Mr. J. G. Millais, in the *Nat. Hist. of British Game Birds*, p. 86, says that instances of cock Pheasants taking their turn on the eggs when the hen is absent are too numerous to particularize and that cock Pheasants have often been seen attending broods of young birds.

REVIEWS.

The Birds of the Island of Bute. By J. McWilliam. 8vo. pp. 128 with map and 9 illustrations.

As we still lack the long-expected work on the Vertebrate Fauna of the Clyde area, it is a matter for congratulation that we now possess a carefully written and reliable account of a small portion of it. Mr. McWilliam's book does not deal with the county of Bute, but only with the island of that name: a somewhat restricted area, as it is only sixteen miles in length, and averages about four miles in width. As might be expected the avifauna is not rich in species, only 168 being recorded, and the rarer stragglers are conspicuous by their absence.

In his distributional notes Mr. McWilliam makes numerous references to the Isle of Arran and Pladda and we think he might also have added a few words on those species which have occurred there, even though they have not been recorded from the island of Bute itself, such as Pallas's Sand-Grouse, the Spotted Crake and the Quail. Many other species which occur in the Clyde area are certain to be met with in Bute sooner or later. At present there is no definite record of any species of Grey Goose, and even such widely distributed species as the Fulmar Petrel, the Lesser and Sandwich Terns, Buffon's Skua, the Phalaropes and the Bittern, are all absent from the list.

Among the breeding species the scarcity of the Corn-Bunting (*Emberiza calandra*) and the Ring-Ouzel (*Turdus torquatus*) is remarkable, for the natural conditions and situation would seem to be favourable to both species. There seems no adequate reason for the Grasshopper-Warbler (*Locustella naevia*) to be common on Arran and decidedly rare in Bute, while the Yellow Wagtail (*Motacilla f. rayi*) which is not rare in Ayrshire has only occurred a few times on Bute.

Although the number of breeding forms is small, on the other hand the number of individuals is great, and as Bute enjoys a wonderfully mild and equable climate, the bird population is large. One striking feature is the presence of the Woodcock (*Scolopax rusticola*) in considerable numbers. The number of breeding pairs is estimated at from 175 to 330, showing a remarkable increase on the figures for 1903 when there were only about 40 or 50 nests. In view of the

diminution of Black-game in other parts of Scotland it is satisfactory to find that here they are at any rate holding their own.

We should like to call attention to two useful features in this work. The varying fertility of a species in different parts of its breeding range is a subject which has been much neglected, and the author has collected some useful data on the average number of eggs laid by certain birds in this area. On the whole the tendency seems to be to lay fewer than the normal number of eggs in the case of those species which show variation in this respect.

There is also some very valuable information as to the bird population and the effect of game preservation on bird life. Without going into details as to the figures on which the results are based, we find that Mr. McWilliam thinks that the total number of birds on the island may reach the surprising figure of 400,000. As Bute is only about sixty square miles in extent, this gives some 6,000 to 7,000 birds to the square mile, or one bird to every twenty-two square yards. There is little doubt that the number of our birds is greatly underestimated by most people, and for comparison with estimates from other districts these figures will be very useful. Another valuable feature is the game list supplied by the Marquess of Bute (p. 123), from which it appears that a total bag of 96,033 head of game was obtained in twenty-eight years. Deducting the 5,013 hares and roedeer, there still remain 91,020 birds, of which the largest items are 50,139 Red Grouse, and 10,993 Snipe, both of which species are still plentiful, though the numbers of Grouse are subject to considerable fluctuations.

Side by side with this may be read the vermin list of the head-keeper in North Bute for one year, which reaches the total of 1,352. After deducting 1,088 mammals we have 264 larger birds left (Hooded Crows, Jackdaws, Hawks of various species and Gulls). This represents roughly about five birds per week all the year round, so that it does not require much calculation to realize the enormous effect of game preservation on the avifauna of a given district. This is of course accentuated in the case of an island, where the influx from outside to fill up the gaps is almost negligible.

The book is carefully prepared, but there are a few points to which attention may be drawn. There is no index of species, but a table of contents on p. 5, in which the Chiff-chaff figures as the "Chaffinch." The identification of birds from colloquial names in old lists is often unsatisfactory, but when Blair, early in the nineteenth century, wrote "Marrets, Ailsa Black Sea Cocks and Sea Parrots," it was the last named which were the Puffins and not the "Ailsa Black Sea Cocks," which were probably Guillemots. In the paragraph on the Brent Goose it is clearly stated that three specimens in the Bute Museum are of the pale breasted "variety." The statement which follows that "at present it is supposed that the two types represent little more than individual variation" is exactly the reverse of the case, as it is now known that the two sub-species (not varieties) have quite different breeding ranges, and do not, as was formerly supposed, breed together in Spitsbergen. The Light-breasted Brent (*B. bernicla hrota*) should be added to the island list.

There is no mention of the Firecrest, but it is said to have occurred in Bute on the authority of Mr. A. R. Reid (*Zool.* 1907, p. 15).

Writing of the Turnstone (p. 94), the author says: "The egg is so conspicuous that a mistake could hardly be made." Here we are in doubt as to whether the writer means "characteristic," as the eggs are often carefully hidden beneath stones or vegetation and have been found well down in a Puffin's burrow.

F. C. R. JOURDAIN.

Fiskehejren. By Vagn Holstein. (4to. Gads Forlag, Copenhagen, 1927.)

THIS well printed quarto volume of 68 pages is devoted to the life history and status in Denmark of the Common Heron (*Ardea cinerea*). It is illustrated with a map on which the breeding places are shown, four coloured plates to illustrate the plumages from the downy stage to maturity, and other uncoloured plates from photographs. The letterpress is in Danish, and includes a list of heronries with historical notes. There is also a synoptical table showing a comparative census of these colonies in 1912 and 1927, from which we note that the number of breeding pairs has increased from 610-710 pairs in 1912 to 1,362-1,410 in 1927. While in 1912 there were but two colonies of 80 to 100 pairs, there are now no fewer than 7 heronries of 80 to 110 pairs, and one of 175 nests.

These figures may be compared with work on the same lines by Watt in Scotland, and more recently by De Chavigny in France, and Brouwer in Holland.

Among other points of interest, we note that the author estimates the incubation period at 28 days, slightly longer than the result obtained by W. Evans from incubation by a hen (25-26 days). Some of the courtship attitudes are figured in the plate to face p. 44.

By watching at night from 9.30 p.m. on June 30th to 2.30 a.m. on July 1st, 1927, the author ascertained that the young were fed at different nests in a colony on twenty-three occasions. In the case of one nest the nestlings were fed on two occasions, viz., at 9.35 p.m. and 1.20 a.m.

There are also interesting notes on the causes of the mortality among young birds, but we have failed to find any definite evidence on the question of a second brood, and though in some cases the eggs are laid on consecutive days, there are also numerous instances of much longer intervals on record.

The great merit of this work consists in the fact that it is the result of original observation and field work, and though there are still many points which need elucidation, it marks a great advance upon our previous state of knowledge, and suggests fresh lines of research.

F. C. R. JOURDAIN.

The Ramblings of a Bird Lover. By Charles E. Raven, D.D., Canon of Liverpool. Sixty-seven photographs by the author. (Martin Hopkinson & Co., Ltd. 10/6.)

THIS book is well named, for it consists to a considerable extent of the relation of observations and experiences among birds gleaned during brief, and often accidental, interludes in a busy life. Though necessarily disconnected, it is an eminently readable book. Every page glows with the intense enthusiasm of the author for his favourite hobby, and anyone, be he the veriest dabbler in the study of birds, cannot but be infected with the same spirit while reading the descriptions of the first meetings with hitherto unknown species.

It naturally covers a very wide range of species, the localities visited ranging from Handa to north Wales, and from county Cork to Texel, and though much of the ground has been covered many times already and there is little that is actually new in the ascertained facts, they have been so well put together, told so charmingly, and are so ably commented upon, that their relation is never wearisome. The chapter on the early life of a young Cuckoo, though the story is now a well-worn one, is one of the best in the book, and is as graphic and as vivid an account of this avian tragedy as can be found anywhere.

The author not infrequently refers to the value of an amateur's casual observations; few people have the time and opportunities for systematic research on single species, so that it is perfectly true that, to a great extent, our knowledge of life histories and animal psychology must be built up upon such casual observations. One striking example of such is given in the preface and, by his fortune in making it, the author has added a new and significant fact bearing on one of the problems of migration. Of course it is well known that most, if not all, the waders are capable swimmers and will take to the water when hard pressed, but it does not appear to be known, except of course in the case of the Phalaropes, that they will do so from choice and under perfectly normal circumstances. Canon Raven, however, describes how he came, a mile or more from the coast of Cork, and in a broken, lumpy sea, upon a couple of Knots "swimming lightly and high and as to the manner born," where there can be little doubt they had settled voluntarily. After being photographed at ten yards distance "they sprang up and flew easily away." It has frequently been suggested in connection with the visits of trans-atlantic migrants to this country that in many cases their sea passage must have been "assisted" by indirect human agency, but who can doubt after Canon Raven's observation that, at any rate among the waders, the journey can be accomplished without it.

One word must be said about the large number of illustrations from the author's camera. There are some that are strikingly good, but as a whole they do not come up to the standard of those in *In Praise of Birds*. Those of the nestlings particularly are mostly too small to bring out the detail properly, they are too crowded, and consequently too closely cut. With some of the others there seems to have been something wrong with the exposure, or else the method of reproduction does not do justice to the originals. No doubt the difficulty of combining unfavourable lighting with the necessary rapidity of exposure accounts for the lack of depth of focus in others.

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ORNITHOLOGICAL REPORT FROM NORFOLK FOR 1927.

BY

B. B. RIVIERE, F.R.C.S., F.Z.S., M.B.O.U.

IN submitting my report on the birds of Norfolk for 1927, I have again to thank a large number of correspondents who have sent me notes, whilst for details of weather conditions I am indebted to Mr. A. W. Preston's monthly records and annual summary published in the *Eastern Daily Press*.

Although the year was by no means devoid of interest from an ornithological point of view, its passing must be hailed with relief on account of the execrable weather for which it will long be remembered. The lack of sunshine, the severe frosts in April and early May, a rainfall of 36.90 inches—10.42 above the normal—and the blizzards, snow-storms, and floods with which the year ended, are sufficient to render it notable even in the annals of this fickle climate, and constitute a record which one hopes may long remain unbroken.

The open weather with which the previous year ended continued through the remainder of the winter, and there was frost only on a few days, in January, with a light fall of snow on 21st and 22nd. Wild fowl were not much in evidence, but at the Hickling Coot shoot, on February 18th, a record bag was made, 1,175 being picked up at the end of the day (J. Vincent). Waders were on the move early in March, and a great passage of Curlews was heard over Norwich on the night of March 8th (G. S. B. Long).

Almost the only spell of warm sunny weather during the year occurred in the third week of April, but this was followed by sharp frosts which lasted into early May, and caused great damage to the fruit crops.

Of the commoner summer migrants, first arrivals were noted on the following dates :—Chiffchaff, April 10th (B.B.R.); Willow-Wren, April 11th (L. Lloyd); Blackcap, April 30th (B.B.R.); Swallow, April 18th (F. A. Bainbridge); Sand-Martin, April 13th (L. Lloyd); House-Martin, April 28th (B.B.R.); Cuckoo, April 19th (E. Ellis); Turtle-Dove, April 30th (B.B.R.); Spotted Flycatcher, May 1st (B.B.R.); Swift, May 2nd (E. Turner).

I have before in these notes (*Brit. Birds*, XVIII., p. 282) referred to the E. to W. passage of Swallows along our northern coast-line which is regularly observed during May and follows the same course as that of the autumn migration. That

these birds do not travel up the coast from the south is shown by the fact that the movement appears only to be in evidence to the west of Weybourne, somewhere between which point and Cley they seem first to touch the coast-line. For the past three seasons Mr. W. S. Sharman has recorded the same E. to W. migration at the Lynn Well lightship at the mouth of the Wash (Riviere, *Brit. Birds*, XX., p. 259), whilst this year I have been fortunate in obtaining notes from his brother, Mr. S. G. Sharman, an equally keen observer, who is stationed at the E. Dudgeon Light, some thirty miles at sea to the east. Here Swallows were observed travelling due E. to W. almost daily, in all weathers and with the wind in any quarter, throughout the whole of May and the early part of June, and I think this evidence points conclusively to this being a regular spring passage across the North Sea from the Continent to the Norfolk coast.

This E. to W. migration in spring of species which follow exactly the same route in autumn is, perhaps, difficult to understand, but is none the less an established fact. It was accepted as such nearly fifty years ago by the authors of the British Association Migration Reports (v. 1883, p. 60), from the evidence of the records from east coast light stations, and has since been confirmed by similar records in the Reports of the B.O.C. Migration Committee, but it appears to have been lost sight of by some modern writers on migration.

With the advent of June commenced the heavy rains which persisted throughout the remainder of the year. The rainfall for the month was 4.80 inches, the highest since 1860, that of September was 7.15 inches, which is a record for this month, whilst November with a total of 5.17 inches was the wettest since 1878. The effect of these June rains upon the young Partridges was disastrous, and following upon two bad years has so reduced the stock that in many districts Partridge shooting was abandoned this season altogether. A noteworthy feature during the month of June was a great passage of Swifts which took place along the Norfolk coast-line. Dr. S. H. Long, who was staying at Blakeney Point, noticed them passing E. to W. every day between June 11th and June 19th. On June 18th numbers were passing the Lynn Well light-vessel from E. to W. and N.E. to S.W. (W. S. Sharman), whilst on 28th and 29th Mr. A. H. Patterson observed an almost continuous flight down the coast-line from N. to S. at Yarmouth. Similar passages of Swifts have been observed in Norfolk as early as mid-July, but a migration upon such a scale at a time when the species is

normally settled at its breeding quarters would appear somewhat of an anomaly. An unusually large migration of Crossbills, to which reference will again be made in my classified notes, took place during July. With August came the usual nocturnal migration of Waders, which, attracted by the lights of the towns, are heard calling overhead on dark and misty nights, and on August 25th the autumn passage of the Passerine migrants was heralded by the first arrival of Wheatears at the Lynn Well lightship (W. S. Sharman). From then onwards an ever-increasing migration was observed each night at this station, culminating on the night of September 6th in a great rush of Wheatears, Redstarts, Pied Flycatchers, Tree-Pipits, Willow-Wrens, Garden-Warblers and Whitethroats, the wings of all of which species were sent to me by Mr. Sharman from birds which had killed themselves against the lantern on this night. Along the coast-line this immigration was equally in evidence. On September 5th the "bushes" at Blakeney Point were full of birds, amongst which Col. W. A. Payn identified Wheatears, Whinchats, Pied and Spotted Flycatchers, Redstarts, Willow-Wrens, Common and Lesser Whitethroats, Garden-Warblers, Tree-Pipits, Linnets, Reed-Buntings and two Wrynecks. Large numbers of Redstarts and Pied Flycatchers were noted by Chestney, the watcher at Scolt Head, on September 6th, whilst Mr. Patterson reported numbers of Redstarts and Pied Flycatchers in St. George's Gardens at Yarmouth on the same day. The wind during the period of this migration was from an easterly quarter, the weather map showing an anti-cyclone stationary over the British Isles and the greater part of western Europe. On September 14th, with the wind N.E., another arrival of the same species of birds, together with some Black Redstarts, was noted by Miss Ferrier at Blakeney Point, on 15th and 16th at Scolt Head by Dr. S. H. Long, and on 16th and 17th, with the addition of several Bluethroats, by Col. W. A. Payn at Cley. The first big "rush" of late autumn migrants, also coinciding with anti-cyclonic conditions over western Europe, was observed at the Lynn Well light on October 7th, 8th and 9th and consisted of Chaffinches, Greenfinches, Linnets, Bramblings, Robins, Skylarks, Blackbirds, Redwings, Thrushes, Hooded Crows and Lapwings (W. S. Sharman). Further large migrations occurred at this station of Thrushes, Redwings, Blackbirds, Starlings and Waders on November 7th, 8th and 9th (wind N.E. 4-5), of Hooded Crows, Rooks, Lapwings, Starlings, Skylarks, Blackbirds, Thrushes and Fieldfares continuously

between November 12th and November 15th (wind N.E.5 to W. light), and of the same species of birds together with Redwings, "Finches" and Snipe on November 18th, 19th and 20th (wind E.S.E.). Towards the end of November, attracted possibly by the flooded state of the county after the heavy rains, extraordinary numbers of Snipe began to come in. At Elmham Mr. O. Birkbeck and another gun killed sixty on November 26th and fifty-two on November 28th, whilst on the latter day, at Swanton Morley, Mr. E. C. Keith with two other guns and the aid of one beater accounted for no less than 210, all of which were killed driving. Even this remarkable bag was not allowed for long to remain a record, for at Whitlingham Sewage Farm on Mr. Russell Colman's shoot at Crown Point, where eighty-five had been shot on December 17th, 226 were killed by five guns on December 20th, these again being practically all driven birds. This last bag appears to be a record for England, Wales and Ireland, the only larger total for one day of which I can find a record being 249 which were killed on the Island of Tiree, Inner Hebrides, on October 29th, 1906 (H. Gladstone, *Record Bags and Shooting Records*, p. 78). The conditions under which the Crown Point bag was made were certainly ideal. On December 15th very severe weather, with continuous hard frost and falls of snow, set in and lasted until December 21st, and during this period Whitlingham Sewage Farm was probably the only open feeding ground remaining in the whole county. The previous record for this shoot, made under somewhat similar weather conditions, but in a season when Snipe were not nearly so abundant, was 144 on December 5th, 1925 (R. Colman).

During November unusually large numbers of Teal also put in an appearance, and another Norfolk shooting record was broken at Ranworth on November 21st with a bag of 294 duck. Sorted into species these proved to consist of 136 Mallard, 127 Teal, 18 Shoveler, 9 Wigeon, and one each of Tufted Duck, Pochard and Gadwall, and one Goosander. The proportion of Teal is extremely high, and it is owing to their presence in such exceptional numbers that this record bag was made possible, for out of the previous highest day's total for this shoot, which was 222, no less than 199 were Mallard (Capt. H. Cator).

Woodcock were more abundant than usual, and remained throughout the severe weather at the end of the year, but though some good bags were made, these did not approach the records of 1923-24. The thaw which set in on December

21st gave way on the 25th to renewed frost, with blizzards, heavy snowstorms, and a violent gale from the N.E., and the year closed with the country under deep snow, and with the flooded river valleys vast sheets of ice. Driven off the sea by rough weather, and unable to find open water inland, vast packs of duck, during this period, were on the wing all day over the Broads district and along the coast-line, whilst thousands of Wood-Pigeons arrived in the county and began to clear up the acorn crop.

Before closing this brief survey of the year, attention may be drawn to the wholesale destruction of sea birds and duck of all kinds which is being caused by the presence of oil in the North Sea. Probably as a result of the wreck of the Dutch tanker "Georgia," which went aground and was broken up on Haisboro' sands on November 20th, oiled birds both dead and dying were cast up in hundreds along the coast line during the rest of this month and throughout December.

A correspondent informed Mr. A. H. Patterson that he had picked up 100 at Overstrand alone, whilst in the ten days between November 24th and December 2nd, Miss J. Ferrier found no less than sixty-eight cast up at Hemsby, these latter consisting of twenty-six Guillemots, twenty-five Razorbills, eleven Common Scoters, one Puffin, one Herring Gull, one Red-throated Diver and one Little Auk.

Amongst the rarer birds which were noted during the year may be mentioned an Ortolan Bunting, several Waxwings, a Honey-Buzzard, Red-footed Falcon, Ferruginous Duck and White Stork, further particulars of which will be found under their appropriate headings.

CLASSIFIED NOTES.

HAWFINCH (*Coccothraustes c. coccothraustes*).—The Hawfinch is by no means a common breeding species in Norfolk at the present time, and the discovery on May 9th of two nests, each containing four eggs, in the same cedar tree in a garden in south Norfolk, as recorded by Dr. S. H. Long (*Eastern Daily Press*, May 14th), must surely be an unique occurrence.

CROSSBILL (*Loxia c. curvirostra*).—The unusually large immigration of Crossbills, which was recorded from many parts of the British Isles during the late summer and autumn, came under observation in Norfolk in July, which is the month in which these birds most often arrive upon our coast-line. On July 1st and 2nd flocks of eleven and five respectively

alighted on the E. Dudgeon lightship, and after a short rest left to the W.S.W. (S. G. Sharman). Two also arrived during the month on the Lynn Well lightship, where, though in sight of land, they remained for a week and eventually died (W. S. Sharman). One was brought into Yarmouth on a fishing boat on July 21st, and on 27th another (moulting from juvenile to first winter plumage) was picked up dead at Haisboro'. On July 20th a flock of five was seen by Chestney the watcher at Scolt Head, whilst all through the month flocks, up to thirty in number, were observed in the neighbourhood of Yarmouth, Bradwell and Belton, by Mr. A. H. Patterson and Mr. E. Ellis. This immigration, which I believe to have been the largest since 1909, should lead to a large increase in the number of pairs breeding in the county in 1928.

ORTOLAN BUNTING (*Emberiza hortulana*).—An adult male was killed at Cley on September 8th (F. E. Gunn).

WAXWING (*Bombycilla garrulus*).—A few Waxwings put in an appearance in the last two months of the year. One was picked up under the telegraph wires on Blakeney Point on November 28th. Two were seen in Yarmouth by Mr. E. Ellis on December 9th, and two were obtained at Poringland on December 20th.

REDWING (*Turdus musicus*).—As already recorded (*Brit. Birds*, XX., p. 250), a Redwing ringed at the Zoological Station at Heligoland on April 14th, 1924, was recovered near Norwich on February 3rd, 1927.

RING-OUZEL (*Turdus t. torquatus*).—An exceptionally early bird was seen near Acle on February 2nd (J. Ferrier).

REDSTART (*Phœnicurus ph. phœnicurus*).—The nesting of the Redstart, in any except the south-western division of the county, is nowadays of such rare occurrence as to be worth recording. At Taverham, where a pair has been suspected of breeding during the past few years, a nest with five eggs was found on June 14th (L. Lloyd), whilst another pair almost certainly bred at Keswick (G. Gurney).

BLUETHROAT (*Luscinia s. gætkæi*).—A few Bluethroats appear to have arrived with the "rush" of small migrants which took place between September 14th and 17th. One was obtained on 16th and another on 17th at Cley (W. A. Payn).

SHORT-EARED OWL (*Asio f. flammeus*).—Only one nest was reported this year, this being in the Broads district. Although the birds were constantly seen throughout the summer, the nest of the pair which bred at Scolt Head in 1926 was not

found until this year. It contained one addled egg, and was surrounded by the wings of Common Terns, amongst which the Owls must have played great havoc.

KESTREL AND LONG-EARED OWL (*Falco t. tinnunculus* and *Asio o. otus*).—On June 16th, in a small wood in the Broads district, I was shown a brood of young Kestrels in a somewhat unusually situated nest, this being within a shallow hole, scraped out probably by a rabbit, under a heap of dead rushes. Nearby in the same wood a Long-eared Owl was brooding half-grown young ones, also on the ground, under a dense tangle of undergrowth.

RED-FOOTED FALCON (*Falco vespertinus*).—On July 5th the keen eye of Mr. Peter Meiklejohn of Gresham's School, Holt, detected a Red-footed Falcon hanging amongst other suspected enemies to pheasant-rearing in a keeper's "larder" at Bayfield. It was in an advanced state of decomposition, having been shot about a month previously, but appeared to be a male in first summer plumage, having the general coloration of an adult male, but with the axillaries and under wing-coverts buff, barred with dark brown.

COMMON BUZZARD (*Buteo b. buteo*).—I am informed by the Rev. F. C. R. Jourdain that a Common Buzzard frequented a wood near Denton throughout the past summer. This is an unusual season for the occurrence of this bird, which, though it nested in the county in days gone by, is nowadays only met with as a spring and autumn passage migrant and occasional winter visitor.

MARSH-HARRIER (*Circus æ. æruginosus*).—Early in May a male and what appeared to be three females arrived in the Broads district, and in due course a nest with three eggs was found, upon which one of the females brooded. After sitting a fortnight, however, she deserted, and the eggs were found to be infertile, and this, together with the fact that the male was never seen to bring her food, makes it probable that she was unmated. The last occasion when a pair of these birds nested in Norfolk was in 1921.

MONTAGU'S HARRIER (*Circus pygargus*).—Montagu's Harriers were singularly scarce in Norfolk in 1927. It is possible that these birds resented the presence of the four Marsh-Harriers at their favourite breeding ground during the summer; but, whether for this reason or for some other, only one nest was found within an area where there have been five or six each season for the past six or seven years. It is possible that a pair or two may have nested elsewhere in the county, but if so they were not recorded.

HONEY-BUZZARD (*Pernis a. apivorus*).—As already recorded by the Hon. J. J. Stourton (*Field*, January 19th, 1928) a male Honey-Buzzard was shot at Cawston on December 23rd. This is a remarkably late date, the latest previous occurrences of which I am aware being one which was killed at Downham Market on November 6th, 1876 (Stevenson, *Norf. & Norwich Nat. Soc. Trans.*, ii., p. 321), and one which is noted in the diary of W. Lowne, the Yarmouth bird stuffer, as having been caught at sea on November 25th, 1882. The vast majority of Norfolk records are for the month of September, though one or two have occurred in May and June. The present specimen, which I had the opportunity of examining, was in perfect condition and appeared to be in first winter plumage, having no grey upon the head, and showing no sign of moult.

OSPREY (*Pandion h. haliaetus*).—One was seen at Hickling at the end of May, whilst a bird which from the description given must certainly have been an Osprey was seen fishing on Hingham sea mere on September 11th (A. B. Longe, *Eastern Daily Press*, September 17th, 1927).

WHITE STORK (*Ciconia c. ciconia*).—On the afternoon of June 14th a White Stork arrived on Breydon, where it remained till dark. It appears to have left again during the night, for on the following morning it could not be found, and was not seen again.

SPOONBILL (*Platalea l. leucorodia*).—On April 6th a Spoonbill arrived on Cley Marsh, where it remained with only occasional short absences until the beginning of August, a second bird joining it for a few days in the second week in July. Another, or possibly the same bird, was seen on Breydon between May 13th and May 20th.

GARGANEY (*Anas querquedula*).—Only one nest of Garganeys was reported from the Broads district this year, and this hatched out successfully.

FERRUGINOUS DUCK (*Nyroca n. nyroca*).—A female in juvenile plumage was shot at Hickling on November 24th (E. C. Saunders).

SURF-SCOTER (*Oidemia perspicillata*).—Miss J. Ferrier informs me that on November 16th, amongst Common Scoters close in-shore off Hemsby beach, she detected three drakes with conspicuous white patches on the nape of the neck, which she considers to have been Surf-Scoters. This rare duck has never been obtained in Norfolk, and the only other record is of a flock of seven which were seen by Miss Turner off Scolt Head on October 2nd, 1925 (*Brit. Birds*, XIX., p. 234).

RED-NECKED GREBE (*Podiceps griseigena*).—Mr. J. R. B. Masefield records in *British Birds* (Vol. XXI., p. 98) having seen a Red-necked Grebe on "one of the Norfolk Broads" in mid-June. This is a most unusual date for the occurrence of this Grebe, which is a winter visitor to Norfolk, and so far as I am aware has never previously been met with in the three months between April and August.

RED-NECKED PHALAROPE (*Phalaropus fulicarius*).—A female Red-necked Phalarope arrived on Salthouse Broad on June 5th and was joined by a male on the 6th. On the following day both birds had disappeared.

BLACK-TAILED GODWIT (*Limosa l. limosa*).—Four Black-tailed Godwits, which arrived at Hickling early in May, remained until the third week in June. Their behaviour, and their constantly frequenting a certain part of Rush Hills, raised hopes that one pair at least would breed, but these hopes, alas, were not realized.

GREAT SNIPE (*Capella media*).—One was shot at Blakeney on October 5th (F. E. Gunn).

SANDWICH TERN (*Sterna s. sandvicensis*).—The number of Sandwich Terns nesting in the county has now been maintained at about the same level during the past three years, though their distribution amongst the three principal Tern colonies varies each season. This year, Blakeney Point was the most favoured colony, holding between 400 and 500 pairs. At Salthouse Broad 200 nests were counted, whilst at Scolt Head, where the majority bred in 1925 and 1926, there were only twenty-one nests. At Blakeney Point about 50 per cent. of the nests appeared to have clutches of two, and there was one clutch of three, whilst a count of the 200 nests at Salthouse on June 6th showed one clutch of three, sixty clutches of two, and the remainder singles (S. H. Long). The first bird arrived (Salthouse) on April 15th, and the first egg was laid at Salthouse on May 15th, and at Blakeney Point on May 17th.

ROSEATE TERN (*Sterna d. dougallii*).—Two pairs of Roseate Terns bred in one of the Tern colonies this year and both nests hatched off successfully.

LITTLE GULL (*Larus minutus*).—An immature bird frequented Hickling during May and June. A considerable immigration seems to have taken place on the Suffolk coast in the autumn, seven adults having been seen in Lowestoft Harbour by Mr. F. C. Cook on August 28th, and four more on October 2nd. On November 15th two were seen at Yarmouth harbour mouth by Mr. C. G. Doughty, and on December 17th one on Salthouse Broad by E. Ramm.

BLACK-HEADED GULL (*Larus r. ridibundus*).—A ringed specimen obtained in Breydon on January 28th, 1927, proved to have been ringed by P. Skovgaard at Filsand, Denmark, on June 17th, 1926 (P. E. Rumbelow).

The increase in the number of nesting colonies of this species in Norfolk during the past few years has been somewhat remarkable. In 1918, when Mr. R. Gurney contributed to the *Transactions of the Norf. & Norwich Nat. Soc.* (Vol. X., p. 424) his valuable paper on "The Breeding Stations of the Black-headed Gull in the British Isles," the only occupied colonies in the county were at Scoulton Mere, Hoveton Broad, Alderfen Broad, and Mow Creek, Wells. To these may now be added the following nesting-sites, together with the year in which they were first colonized:—Breckles (1922), Northwold Fen (1921, deserted in 1925), Salthouse Broad (1923), Cley Marsh (1923), Scolt Head (1924), Blakeney Point (1925), and Hickling (Rush Hills, 1927).

COMMON GULL (*Larus c. canus*).—A ringed bird recovered in Breydon on December 12th, 1927, was ringed by P. Skovgaard at Vresen, Denmark, on July 20th, 1927 (P. E. Rumbelow).

LITTLE AUK (*Alle alle*).—A few were picked up during November and December as is usually the case, but there has been no notable "wreck" of these little birds since January, 1912.

BIRDS OBSERVED IN THE NORTH SEA, 1927.

BY

CAPTAIN DAVID K. WOLFE MURRAY, R.A.R.O.

WHILE I have been at sea with the North Sea fishing fleets for over four years and spent, on the average eight months a year afloat, it was not until late in the winter of 1925, when I met Dr. Lowe of the Natural History Museum, and was talking to him of the number of land birds one saw at sea, that he suggested that I should keep a bird log. Accordingly I began to keep rough notes on birds seen, but these notes were at first very scrappy, and further, very disjointed, owing to my being much ashore during the next year.

During 1927, however, I made a sincere effort to record every bird seen, together with the ship's position and the force and direction of the wind, giving too, whenever possible, the direction in which the bird was travelling.

This latter point is one very difficult to fulfil, except in the case of Geese and the larger waders, who indicate their presence by calling as they fly.

Small birds, flying mute, are extraordinarily hard to pick up, and so, until they actually appear on board, their presence is seldom realised.

Again, the birds which so arrive are nearly always weary stragglers and may come from any direction, though they always arrive aboard head-to-wind, and since wind directions vary much from day to day, this can give no accurate, or even approximate, indication of their original course.

Those cases in the log in which the birds' line of flight is definitely stated, were occasions on which birds were seen flying high and held their course all the time they were in sight.

The ship's position is that obtained at noon on the date of the bird being seen, corrected up to time by dead reckoning in single entries, and the average given when many entries occur.

Date	Species	Nos.	Lat. N.	Long. E.	Wind
JANUARY.					
22nd	Brambling (<i>F. montifringilla</i>)	90	55° 25'	4° 40'	Nil.
	Skylark (<i>A. arvensis</i>)	1			
MARCH.					
1st	Starling (<i>S. vulgaris</i>)	3	53° 30'	3° 20'	S.S.W. strong.
3rd	Chaffinch (<i>F. cœlebs</i>)	1	54° 40'	5° 10'	S. by W. mod.
4th	Starling	1	do.	do.	do. strong.
8th	Rook (<i>C. frugilegus</i>)	2	54° 35'	4° 20'	S.S.W. light.
	Starling	15			
13th	Rook	1	54° 57'	4° 30'	E. by N. mod.

Date	Species	Nos.	Lat. N.	Long. E.	Wind			
MARCH—continued.								
16th	Pipit (Meadow) (<i>A. pratensis</i>)	1	54° 30'	4° 35'	E. by N. mod.			
	Chaffinch	1						
20th	Chaffinch	1	55° 20'	6° 00'	—			
21st	Starling	1	do.	do.	do. do.			
22nd	Wood-Pigeon (<i>C. palumbus</i>)	1	55° 40'	6° 00'	—			
23rd	Chaffinch	5	do.	do.	N.W. mod.			
	Starling	10						
27th	Greenfinch (<i>C. chloris</i>)	3	56° 00'	5° 30'	S.S.E. mod.			
28th	Hooded Crow (<i>C. cornix</i>)	1	do.	do.	do.			
	Chaffinch	3	55° 50'	5° 40'	S.E. mod.			
29th	Hooded Crow	1						
	Chaffinch	5						
	Hedge-Sparrow (<i>P. modularis</i>)	2						
	Starling	42						
	Redstart (<i>P. phænicurus</i>)	1						
(1)	Dunlin (<i>C. alpina</i>) ...	1						
	Brambling	8						
	Grey Wagtail (<i>M. cinerea</i>)	1						
	Blackbird (<i>T. merula</i>)	1						
30th	Chaffinch	1				do.	do.	do.
	Starling	13						
APRIL.								
1st	Chaffinch	4	55° 30'	5° 40'	W.N.W. strong.			
	Rook	1						
	Starling	2						
8th	Robin (<i>E. rubecula</i>)	1	56° 10'	7° 20'	N.W. mod.			
	Chaffinch	6						
(2)	Starling	1						
	Golden-crested Wren (<i>R. regulus</i>)	1						
	Tree-Sparrow (<i>P. montanus</i>)	1						
10th	Tree-Pipit (<i>A. trivialis</i>)	1				56° 00'	7° 25'	W.N.W. mod.
	Brambling	1						
	Chaffinch	1						
	Hedge-Sparrow	1						
	Greenfinch	3						
	Sparrow-hawk (<i>A. nisus</i>)	1						
11th	Chaffinch	1	56° 5'	7° 30'	W.N.W. do.			
	Skylark	1						
	Greenfinch	10						
19th	Wheatear (<i>Æ. ænanthe</i>)	1	56° 5'	7° 15'	N. by W. light.			

(1) Was already well advanced into summer plumage.

(2) This position is only 40-50 W. of Danish coast.

Date	Species	Nos.	Lat. N.	Long. E.	Wind
MAY.					
5th	Pied Flycatcher (<i>M. hypoleuca</i>)	1	55° 30'	6° 50'	N.N.E. light.
	Redstart	1			
	Garden-Warbler (<i>S. borin</i>)	1			
	Ring-Ouzel (<i>T. torquatus</i>)	1			
6th	Lesser Whitethroat (<i>S. curruca</i>)	2	55° 50'	7° 00'	do. do.
	Peregrine (<i>F. peregrinus</i>)	1			
	Meadow-Pipit ...	1			
JUNE.					
3rd	Lapwing (<i>V. vanellus</i>)	1	54° 50'	5° 20'	Nil.
17th	Swift (<i>A. apus</i>) ...	2	54° 55'	6° 40'	S.S.W. fog.
18th	Turtle-Dove (<i>S. turtur</i>)	1	do.	do.	do. do.
26th	Swallow (<i>H. rustica</i>)	2	54° 20'	4° 30'	W. gale.
JULY.					
8th	Whimbrel (<i>N. phæopus</i>)	1	54° 40'	4° 40'	E.N.E. foggy.
9th ⁽¹⁾	Whimbrel	4	54° 50'	4° 45'	do. mod.
19th	Redshank (<i>T. totanus</i>)	10	55° 25'	4° 50'	N. fog and rain
22nd	Starling	2	55° 10'	4° 10'	N.N.W. light.
30th	Garden-Warbler ...	1	54° 40'	4° 30'	S. light.
AUGUST.					
1st ⁽²⁾	Whimbrel	5	54° 50'	4° 10'	Nil., foggy.
5th	Wheatear	1	54° 35'	4° 50'	S. by E. mod.
Ashore from August 11th to September 14th.					
SEPTEMBER.					
19th	Snow-Bunting (<i>P. nivalis</i>)	1	56° 00'	3° 40'	N.W. mod.
	Meadow-Pipit ...	3			
	Fieldfare (<i>T. pilaris</i>)	1			
22nd	Golden-crested Wren	1	56° 10'	4° 5'	N.N.W. strong.
	Sanderling (<i>C. alba</i>)	1			
	Kestrel (<i>F. tinnunculus</i>)	1			
24th	Swallow	1			
	House-Martin (<i>D. urbica</i>)	1	56° 10'	3° 30'	S.E. strong.
	Tree-Pipit ...	1			
	Warbler. Unknown	1			
OCTOBER.					
9th	Chaffinch	50-60	55° 10'	4° 30'	—
	Brambling	30-40			
	⁽³⁾ Golden-crested Wren	10-20			
⁽¹⁾ Flying high, calling and going S.E.					
⁽²⁾ Flying S.S.W.					
⁽³⁾ Only seen at night.					

Date	Species	Nos.	Lat. N.	Long. E.	Wind
OCTOBER—continued.					
11th	Chaffinch ...	20-30	} 55° 20'	4° 50'	—
	Brambling ...	do.			
14th	Starling ...	4	} 55° 00'	4° 20'	N.N.W. mod.
	Golden-crested Wren	1			
	Skylark ...	5			
15th	Starling ...	6	} 55° 5'	4° 10'	E. by N. light.
	Thrush ...	1			
	Redwing				
	(<i>T. musicus</i>)	4			
	Snipe ...	1			
	Robin ...	1			
	Golden-crested Wren	1	} 55° 10'	4° 10'	W. by S. strong
16th	Starling ...	6			
	Chaffinch ...	1			
	Redwing ...	1	} 55° 15'	4° 00'	do. mod.
17th	Starling ...	3			
18th	Starling ...	6	do.	do.	W. by W. strong
20th	Starling ...	1	55° 00'	4° 35'	N.N.W. Mod.
22nd	Starling ...	1	} 54° 45'	4° 30'	S.S.W. strong.
	Wood-Pigeon ...	1			
	Brambling ...	1			
23rd	Starling ...	7	} 54° 50'	4° 10'	S.E. gale.
	Hooded Crow ...	1			
	Sparrow-Hawk ...	1			
24th	Starling ...	16	} do.	do.	do. mod.
	Redwing ...	1			
	Brambling ...	2			
25th	Starling ...	10	54° 50'	4° 20'	S.W. strong.
30th	Mistle-Thrush		} 55° 25'	5° 00'	W. by S. mod.
	(<i>T. viscivorus</i>)	1			
NOVEMBER.					
1st	Starling ...	60-70	} 55° 15'	4° 30'	S.W. mod.
	Rock-Pipit				
	(<i>A. spinoletta</i>)	1			
	Redwing ...	1	} 55° 25'	4° 40'	W. by S. mod.
2nd	Starling ...	70-100			
	Fieldfare ...	1	} 55° 30'	4° 30'	do. do.
3rd	Starling ...	30-40			
	Skylark ...	1	55° 30'	4° 00'	W. by N. light.
5th	Starling ...	6	55° 20'	3° 50'	W. by S. mod.
6th	Fieldfare ...	2			
DECEMBER.					
3rd	Starling ...	1	} 54° 10'	4° 00'	Nil.
	Brambling ...	1			
	Shag (<i>P. aristotelis</i>)	1			
	(¹)Scoter (Surf ?)				
	(? <i>O. perspicillata</i>)	1	} 55° 10'	5° 10'	E. mod.
19th	Chaffinch ...	1			
31st	Great Crested Grebe		} 20-30	Thames Estuary	—
	(<i>P. cristatus</i>)				

Total of different species observed ... 46 species.

(¹) The Scoter was black all over, with white bands on head and upper neck.

OBITUARY.

THE LATE JAMES EDMUND HARTING.

By the death of James Edmund Harting we have lost one of the most prominent of the naturalists of the nineteenth century, who, though more particularly devoted to Ornithology was also an expert writer on Falconry, Angling, and Antiquarian lore.

Born at Chelsea in 1841 and educated at Downside School and London University, he at first took up his father's profession of Solicitor, but, finding the Law distasteful, made up his mind to follow his true bent for Natural Science. As early as 1866 he published *The Birds of Middlesex*, while in 1869 he wrote his first article for *The Field*, and was on the staff of that paper during a period of over fifty years until his death at the age of 87 on January 16th, 1928. He was for long Editor of its Natural History Section, and also took over that of Shooting, besides being constantly available for answers on more general matters.

From 1877 to 1896 Harting edited *The Zoologist* and in 1882 was appointed to organize the Zoological Library at the newly-built Natural History Museum in South Kensington. Later he exchanged this post for that of Librarian and Assistant Secretary to the Linnean Society at Burlington House, and there remained a genial and courteous helper to all who needed his aid until his retirement in 1902.

Throughout all this period he kept up his devotion to sport, and was a welcome guest at many a country place for his charm, coupled with his skill as a shot. He was obliged to decline an invitation to accompany the late King Edward when Prince of Wales to India, but was appointed by the Government Secretary of the Vole Plague Commission (1893) and had previously helped to draft the 1873 Wild Birds' Protection Act.

As early as 1880 he was one of the chief British supporters of Falconry, and is said to have been the founder of the short-lived "New Hawking Club" at Epsom Downs.

Some of his chief works were:—*British Animals extinct within Historic Times*, *The Birds of Shakespeare*, *A Handbook of British Birds* (two editions), *Our Summer Migrants*, *Recreations of a Naturalist*, *Hints on Shore Shooting*, *Hints on the Management of Hawks*, and, greatest of all, *Bibliotheca Accipitraria* with its wealth of information for the Falconer.

As a kindly and trusty friend many will regret the loss of Harting, and as a great authority on Wading Birds all ornithologists will find his name on the roll of eminent naturalists.

A.H.E.

AN UNRECORDED SOMERSET HERONRY,

BY

STANLEY LEWIS, M.B.O.U.

IN view of the forthcoming census of British Herons, the present time seems very opportune to place on record for the first time the presence of an old-established Heronry of my acquaintance at Banwell, Somerset. It is a surprising fact that up to the present time no writer on Somerset ornithology has made any mention whatever of this Heronry.

Messrs. D'Urban and Mathew in their list of West-country Heronries, 1895, do not allude to it; it is not chronicled in M. A. Mathew's "Revised list of Birds of Somerset"; neither had it come to the knowledge of the Rev. F. L. Blathwayt when he published his list of birds (1906) for the Victorian History of Somerset; the late James Turner's "Notes on Somerset Birds" from 1865 to 1911 also yields a blank. The most recent writer on the subject, the late Dr. J. Wigglesworth, was residing well within two miles of this Heronry when he wrote his "Heronries of Somerset" (1918), but did not include it, so I may reasonably infer that it was entirely unknown to him.

This Heronry is composed of about fifteen pairs of birds, the nests are placed in Scots firs, with mixed deciduous trees, such as oak, yew, ash, and sycamore, near by, which encircle for a short distance the rising ground of Banwell Wood near the top or "plain," the name by which the meadow on the summit is known, and lies north of the main road leading from Banwell Castle to Banwell Village.

The nesting trees occupy a very commanding position, and the incubating birds must enjoy an unbroken view of the surrounding moorland stretching away to the shores of the Bristol Channel. Through the courtesy of Mr. J. R. Statter, I have been able to gather some information respecting the age of this Heronry. These woods, well over one hundred acres in extent, were for many years in the possession of Mr. J. Simpson, owner of Banwell Abbey, but were subsequently sold and now form part of the estate of Mr. R. Calvert, of Banwell Castle. From interviews with very old residents, I gathered the important information that Herons nested in these woods well over fifty years ago, and in larger numbers than at present, the "plain" then being well fenced in and stocked with deer. It is a strictly preserved Heronry, and probably vies in antiquity with that at Brockley Park six or seven miles away.

NOTES

"BRITISH BIRDS" CENSUS OF HERONRIES.

ALTHOUGH a large number of correspondents in all parts of the country have already promised to make observations in connection with the census of Herons' nests in 1928, announced in the last number of *British Birds* (*antea*, pp. 210-11), many more observers are required to ensure the census being carried out with thoroughness. Many readers may intend to make observations and have as yet neglected to inform us of the district they intend to explore. We would particularly request everyone who can make observations or can give us any information about heronries, or even single nests of Herons, to communicate at once so that we may know how well the ground is covered.

We are pleased to state that the fullest co-operation of Scottish ornithologists has been promised through Miss L. J. Rintoul and Miss E. V. Baxter, who have kindly undertaken to organize the enquiry in Scotland. All offers of help in that country which reach us will therefore be forwarded to them. Similarly other ornithologists have undertaken to organize the enquiry in their counties and even in larger districts.

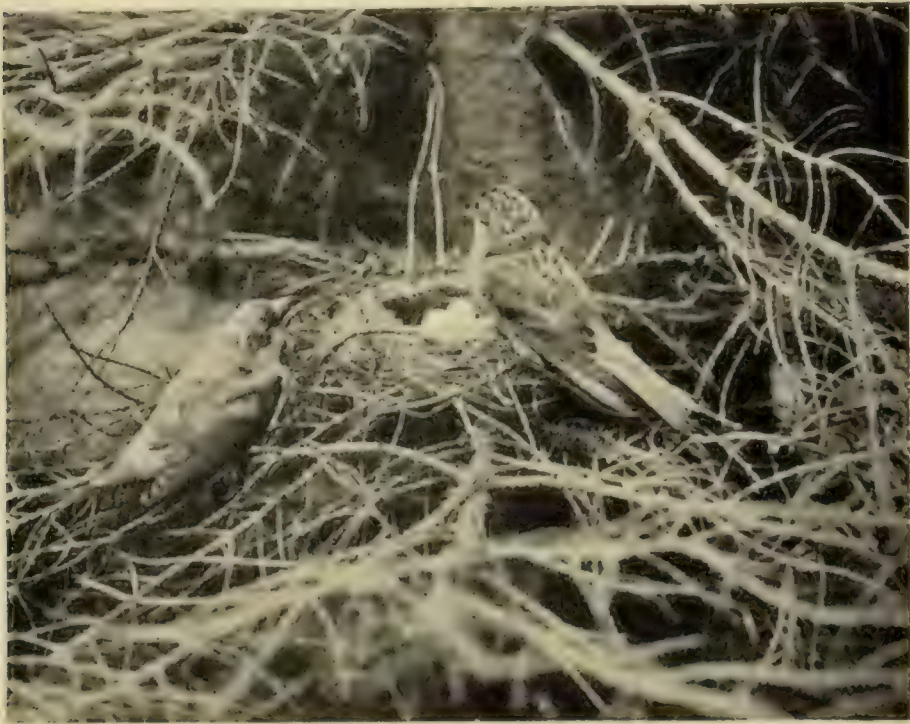
It is, however, obvious from information already received, that, owing to the very considerable changes which have taken place during recent years in the status of the Heron as a breeding bird, no existing lists of heronries are reliable, and observers in all parts of the country are much required to bring to light new or unrecorded breeding places, as well as to give details of the present status of those heronries which are mentioned in various works. Some of our readers may be able to help in discovering unknown breeding sites by appealing for information in the local press, and we would again urge those who can make observations, whether positive or negative, to inform us of the district they intend to cover.

THE EDITORS.

CROSSBILLS BREEDING IN DENBIGHSHIRE.

On the 20th July, 1927, a small party of six Crossbills (*Loxia curvirostra*) came to Garthmeilio, Llangwm, Denbighshire, and in the course of the next few days their number increased to 30-40 which remained for months in the immediate neighbourhood, mostly frequenting the coniferous plantations,

but also visiting the surrounding bare hillsides, where I found them feeding among flocks of Linnets and Goldfinches. After the great gale of the end of October, 1927, most of the Crossbills left, but a few remained, and at the end of January, 1928, I discovered a pair nesting in a spruce in one of Garthmeilio coverts 15-20 feet from the ground, the nest being placed on a horizontal branch much closer to the main trunk than is described as usual by ornithologists. The hen had only



CROSSBILLS AT NEST IN DENBIGHSHIRE, JAN., 1928.

(Photographed by M. V. Wenner.)

just begun to sit on a clutch of four eggs, and it was very interesting to observe the affectionate behaviour of the cock bird, he paying frequent visits to the nest and constantly "showing off" to his mate.

In the short time at my disposal, between discovery of the nest and having to go abroad, I was lucky enough to secure several snapshots of the nesting birds of which I enclose one.

M. V. WENNER.

RAPID SUCCESSION OF BROODS OF CIRL BUNTING.

On July 2nd, 1927, I found the nest of a Cirl Bunting (*Emberiza cirrus*) in west Sussex containing three young. These left the nest on July 9th. On July 19th a new nest had been built and clutch of three eggs laid; the three young leaving

the nest on August 11th, thirty-three days after the previous brood left ; the total days for incubation and fledging being twenty-three. An earlier nest containing one addled egg of the same pair was also found, pointing to three broods having been reared. Perhaps I should add that this is an isolated pair and that all three nests were within some thirty yards of one another.

As many pairs in this neighbourhood have fresh eggs up to mid-August, and some commence nesting in mid-May, the species would appear to be undoubtedly treble-brooded.

RAYMOND CARLYON-BRITTON.

ROBIN TAKING FISH FROM TANK.

ON December 15th, 1927, my gardener, Arthur Goode, and my chauffeur, Edmund Plumridge, were standing together by the lily tank in my garden at Stratford-on-Avon, when they observed a Robin (*Erithacus rubecula*) perched upon a rock which overhung the water. Suddenly, to their surprise, it swooped down on to the pond, submerging its head, and reappeared with a tiny fish in its beak. This fish, a minute roach, struggled for a second or two in the Robin's grip, was then dropped on the ground, there pecked, and ultimately swallowed whole.

On a later occasion, when drawing off the water together, both men saw a Robin, presumably the same bird, make a dart at some object in the tank, but this time no capture resulted.

The fact that a bird of this species should thus emulate the Kingfisher strikes me as being so remarkable that I pass on the record in the hope of learning whether similar exploits have before been brought to your notice. R. HUDSON.

NIGHTJAR WITH UNFLEDGED YOUNG AND EGGS.

ON July 16th, 1920, I flushed a hen Nightjar (*Caprimulgus e. europæus*) among the sandhills at Braunton Barrows, Devonshire. She kept jerking up a few inches above the sand, lying with wings fully extended and beating frantically on the ground, head raised and tail "fanned" out, calling every half second with a short, inward cluck, "tũk." I then saw that what seemed to be a piece of rotten, worm-eaten wood, was a young Nightjar, 5½ inches long, lying perfectly still and not even blinking for some five minutes. Close to its tail was a single egg, which appeared to be fresh.

On the 19th, on revisiting the place, it was some time before I could distinguish the youngster, which refused to stir until

touched, when it fluttered some ten yards and would not budge again. We found another egg, quite fresh, on the spot it had been resting on. The mother bird was seen near by, rising and dropping with a quickly repeated "Tūk," but this time without the wing and tail display. H. G. ATTLEE.

[It seems possible that the egg found on the 16th was infertile as there was apparently only a single young bird, but on the other hand from observations made by Dr. Heinroth on a pair which reared two broods in captivity, the two eggs of the second brood were laid on July 3rd and 5th, when the young of the first brood were only thirteen days old. During the incubation-period of the second clutch, the young of the first brood were fed by the male. For details see *Journ. f. Orn.*, 1909, pp. 56-83.—F. C. R. JOURDAIN.]

DARK-BREASTED BARN-OWL IN RUTLAND.

A BRIEF note upon a Dark-breasted Barn-Owl (*Tyto alba guttata*) seen by me on December 26th, 1925, may be of interest.

On that day, at 3 o'clock in the afternoon, I watched one of these birds under excellent conditions quartering the grass fields close to the confluence of the small river Chater with the Welland, near to the village of Tinwell, and unaffected, apparently, by the broad daylight.

Viewed from a short distance, the bird's breast appeared to be of a uniform dark buff hue, and I may add that this pronounced colour was evenly distributed, and, to the best of my judgment, as deep as that of an authentic preserved example of this form of Barn-Owl in the Birmingham Museum. The latter specimen was originally in the Chase collection and was shot by Mr. Field, of Lyndon House, Olton, Warwickshire, on February 6th, 1886. E. ST. GEORGE BETTS.

HOBBY AND SWIFT.

ON July 25th, 1924, I was witness of a fine chase by a Hobby (*Falco subbuteo*) of a Swift (*Apus apus*), as seen from a Midland express in Leicestershire. When first seen the Swift was quite low, and though it might have been "put down," I think this was the beginning of the chase, as the Hobby was then at a considerable distance away from and above it. The Hobby, after a sweep or two round, stooped almost above the train and they were lost to view, but, by crossing to the other side, I was then able to see three or four magnificent stoops.

The Swift was hopelessly outclassed even at the first (I reckoned the Hobby to overhaul it in but five or six times the distance between them at the commencement of the stoop)

and only saved itself by inches; at the last the Hobby seemed to catch up in only two or three times the distance between them. The birds were then far behind, but I could no more see the Swift, and the Hobby changed its glorious stoops for a straight-ahead flight in the track of the train.

HUGH G. ATTLEE.

RECORDS OF GADWALL IN CO. DOWN.

As the Gadwall (*Anas strepera*) is described by R. J. Ussher, both in *The Birds of Ireland* and in his *List of Irish Birds* (1908), as a scarce and irregular or uncertain visitor, I thought it might be of interest to transcribe from my game-register the dates and numbers of this duck shot on the Downpatrick Marshes. They are as follow:—1913, December 19th, one; 1918, none; 1919, March 1st, two; 1920, none; 1921, February 21st, four; December 13th, ten; 1922 and 1923, none; 1924, November 7th, four; 1925, January 24th, nine; December 1st, one; 1926, December 20th, three; 1927, December 3rd, eighteen.

CHARLES MULHOLLAND.

SURF-SCOTER IN FORFARSHIRE.

ON March 1st, 1927, a male Surf-Scoter (*Oidemia perspicillata*) was obtained in Montrose Basin, and is now in Montrose Museum. As far as I am aware, this is the first record for Forfarshire, and for the whole faunal area of "Tay." SCONE.

SMEW IN LONDON.

ON February 7th, 1928, I saw a Smew (*Mergus albellus*), a red-headed bird, on the east end of the Serpentine in Hyde Park. The Tufted Ducks around it did not seem to pay any attention to it. On the following morning I saw it again, this time near some Mallards which did not take any notice of it.

L. PARMENTER.

SMEW IN MIDDLESEX.

THE Smew (*Mergus albellus*), though regularly recorded in Essex and Surrey, is uncommon in Middlesex, and particularly so away from the Thames valley reservoirs. It may therefore be worth recording that I saw a brown-headed bird of this species on Ruislip Reservoir on January 22nd, 1928. It was very nervous and frequently flew from one end of the reservoir to the other.

L. PARMENTER.

EARLY NESTING OF LITTLE GREBE IN KENT.

ON March 27th, 1927, I found a nest of a Little Grebe (*Podiceps r. ruficollis*), containing two eggs, in Romney Marsh, Kent. I think this is exceptionally early.

It is interesting to note that a friend, Mr. G. Crosbie-Hill, also found a Little Grebe's nest, with two eggs, on the same day, less than half a mile away.

It seems possible that, in this district at any rate, the Little Grebe starts nesting earlier than is generally accepted.

D. D. GODFREY.

[The earliest date for eggs of which I have any note is March 3rd, 1897, near Harrogate, (*B. of Yorks*, II. p. 748). This is of course quite an abnormal date, and the next is on March 16th, 1882, near Marlborough. Records of full clutches during the first days of April are more numerous, see *Zool.*, 1889, pp. 231 & 261.—F.C.R.J.]

EARLY NESTING OF STONE-CURLEW IN SUSSEX.

On April 28th, 1927, I found a pair of Stone-Curlew's (*Burhinus æ. ædicnemus*) eggs in west Sussex in a very advanced state of incubation. As the eggs are laid on alternate days, and the incubation-period is twenty-five to twenty-six days in this species, this clutch must have been complete by about the first week in April.

RAYMOND CARLYON-BRITTON.

KENTISH PLOVER IN NORFOLK IN WINTER.

A KENTISH Plover (*Charadrius a. alexandrinus*) was secured by Edward Ramm, the well-known Cley gunner, in Blakeney harbour, Norfolk, on December 30th, 1927. Nowadays this bird is a rare visitor to Norfolk, and has not, I believe, been previously recorded from the county in winter.

Mr. Witherby kindly examined the specimen and says it is of the typical race, and "if sexed correctly is a male in first winter plumage."

CLIFFORD BORRER.

TWO-BARRED CROSSBILL IN CO. ANTRIM.—In my last notes on the Irruption of the Crossbill (*antca*, p. 227) I stated that we had not had this species reported in the British Islands during its present irruption. I regret to have overlooked a record by Mr. J. A. Sidney Stendall in the *Irish Naturalists' Journal*, 1927, p. 255. Mr. Stendall states that on August 3rd, 1927, Dr. C. J. Milligan, of Belfast, had sent to him an adult male *Loxia leucoptera bifasciata*, which had been secured the previous day in co. Antrim. The bird was too badly shot for preservation, but Mr. Stendall has examined the wings and head, as well as some of the brightly coloured body-feathers. Mr. Stendall informs me that the specimen was secured near Crumlin out of a flock of some fifty Crossbills, probably mainly of the common species, but that it was not possible to make certain of this.

H.F.W.

LATE STAY OF RING-OUZEL IN WESTMORLAND.—The Rev. E. U. Savage informs us that on November 29th, 1927, Mr. James Macdiarmid, gamekeeper at Barbon Manor and a trustworthy observer, saw a Ring-Ouzel (*Turdus torquatus*) on the Fells on the borders of Westmorland and Yorkshire. The bird was near to him on a wall so that identification was easy.

ALBINO RED-NECKED GREBE IN LINCOLNSHIRE AND OTHER ALBINISTIC BIRDS.—Mr. B. A. Pye has sent me an entirely white Grebe, which was shot by Mr. Dick White at Cleethorpes, Lincolnshire on December 29th, 1927. I passed the bird on to Lord Rothschild, who informs me that it is a specimen of *Podiceps g. griseigena* and the first British-taken albino of that species he has heard of. The bird had a slight creamy tinge on the mantle, but was otherwise pure white, and when it reached me on January 3rd the feet were of a palish yellow, and bill yellow at the base and yellowish-horn at the tip. It was exhibited at the meeting of the British Ornithologists' Club on February 8th.

Miss P. H. Arundel informs me that she saw a cream-coloured Lapwing (*Vanellus vanellus*) at Nostell Lake, Yorkshire, on February 2nd, 1928. Miss V. M. Peel saw a Blue Tit (*Parus cæruleus*) at Swansea in February which had the head, wings and tail of a pale creamy-grey, rump very pale yellow and "the dark lines round the crown and down the breast faintly visible." Messrs. Hunter & Son send a photograph of a Mistle-Thrush (*Turdus viscivorus*) shot near Belfast recently which appears to be entirely white.
H.F.W.

LETTER.

HOUSE-SPARROWS ROOSTING IN LAMPS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. V. C. Wynne-Edwards's note as to the roosting of House-Sparrows on the flanges of electric standard lamps (*antea*, p. 229), I beg to point out that this may be witnessed on any winter night in any of the London Parks. With the Metropolitan Sparrows this is a habit of long standing, as I first noticed it many years ago. As recorded by your correspondent, it is noticeable that these birds sit with their backs to the lights, for one usually sees an irregular circle of protruding tails.

F. HOWARD LANCUM.

DARTFORD, KENT. February 4th, 1928.



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WITH WHICH WAS INCORPORATED IN JANUARY, 1917, 'THE ZOOLOGIST.'

EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND

NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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NOTES ON THE FOOD OF CERTAIN BIRDS

BY

CHARLES ELTON.

SINCE exact information about the food-habits of British birds is greatly required, the few notes given below seem worth recording. For the identification of most of the insects I am indebted to Mr. O. W. Richards, who has also contributed several of the observations. Dr. G. H. Carpenter kindly identified the springtails.

HOUSE-SPARROW (*Passer d. domesticus*).—Catching and eating winter-gnats (*Trichocera* sp.) at Headington, Oxford, November, 1922. Eating small Typhlocybid hoppers, and aphids, on walls and tree-trunks in a Hampstead garden, autumn, 1921. (O. W. Richards.)

PIED WAGTAIL (*Motacilla alba yarrellii*) and WHITE WAGTAIL (*M. alba alba*).—A small flock seen catching and eating flies (*Dilophus febrilis* Linn.) which were flying about in great numbers over grassland on Lundy Island, north Devon, September 4th, 1927. This fly is the species which is probably one of the most important agents in fertilising fruit blossom in England (see F. W. Edwards, Ann. Applied Biol., Vol. 12, p. 263, 1925).

ROCK-PIBIT (*Anthus s. petrosus*).—Seen eating large quantities of winged ants (*Myrmica ruginodis* Nyl.) which were dancing in a swarm on the top of a sea-cliff on Lundy Island, August 31st, 1927. Ants of various species are extremely abundant on the island, and at this time many of them were swarming in the winged state.

BLUE TIT (*Parus c. obscurus*).—One was watched for several days in a garden at Picket Hill in the New Forest, visiting a Scots pine and extracting the seeds out of the old, open, brown cones. This was in August, 1927, when there was a rather large crop of old cones on the trees. It was also noticed that there were huge numbers of two species of springtail (*Entomobrya nivalis* Linn. and *Anurophorus laricis* Nic.) living between the scales of the cone, so that careful observation of the bird was required in order to find out whether it was eating the insects or the seeds. In this case the wing of the seed could be seen fluttering down after the bird had eaten the seed itself.

GREAT TIT (*Parus m. newtoni*).—Eating dead hive bees outside a hive, University Museum, Oxford, January, 1926, and again in January, 1928. (O. W. Richards.)

WHEATEAR (*Enanthe enanthe*).—On Lundy Island in August, 1927, these birds were abundant, but some difficulty was found in defining what type of ground they actually used for feeding. They did not feed among the heather, or on the grazed grassland, but rather on little patches of boggy ground, e.g., where streams ran through the heather, with short turf or other vegetation, or wet mud, by the edges. Several birds were watched feeding on insects in one of these places; the only things to be seen on the wet mud were small flies. These, when identified, were found to belong to two species, *Sciara Thomæ* Linn. and *Ectomus alpinus* Hal.

ROBIN (*Erithacus rubecula*).—Seen to pick up the larva of a moth, *Adela viridella*, on the ground, in an oak wood near Oxford, October, 1922. The bird dropped the larva when startled, and so the latter could be identified. The interest of this observation is that this larva is protectively coloured, and very difficult to see, but the Robin apparently found no difficulty. (O. W. Richards.)

GREEN WOODPECKER (*Picus v. virescens*).—Seen eating flies which were running about on fresh cow-dung, in a flood-plain meadow by the River Cherwell, Oxford, April, 1926. The flies were *Borborus equinus* Fall.—a very common species that breeds in cow-dung.

WOOD-PIGEON (*Columba p. palumbus*).—On June 6th, 1927, Mr. V. C. Wynne-Edwards and myself watched a flock of thirty-five Pigeons eating the seed-heads of buttercups in a grass field on the University Farm, near Oxford. They could be seen pecking off these seed-heads, and examination showed that no other species of plant had been touched. The buttercups in this field were chiefly *Ranunculus bulbosus*, the few plants of *R. acris* which were also present had not been touched because the seeds were not yet abundant, the latter species flowering later than the former. The birds had only been eating the green seeds (which incidentally tasted very acrid to us), and the number which had been destroyed was very great, amounting to something over a third of the heads. It would be interesting to find out whether this is a common habit of the Wood-Pigeon in spring, as if it turned out to be so, the effect would be distinctly beneficial to grassland in England.

ROOKS NESTING IN STAG-HEADED TREES.

BY

J. M. DEWAR, M.D.

SINCE the year 1925 Rooks (*Corvus f. frugilegus*) have nested in stag-headed trees near the city of Edinburgh. Whether they did so before 1925 I cannot say, as in that year my attention was first attracted to the subject by reading McDiarmid's *Sketches from Nature* (1830 : 209). McDiarmid, whose observations were made in Dumfriesshire, thought that the birds preferred to nest in stag-headed trees. At the present time there are many stag-headed trees in the southern and eastern suburbs of Edinburgh, but Rooks nest in only a small number of these trees, so that I hardly think the Rooks can be said to show a preference in this locality. Also, most of the Rooks nest in healthy trees of which there is plenty.

I should perhaps explain that a stag-headed tree is one in which the top branches are dead and project like antlers above the leafy canopy. Stag-headedness is a definite sign that the vitality of a tree has been injured, and after the appearance of stag-headedness death of the whole tree follows in the course of some years. Hereabouts the affected trees are beeches and oaks. I have not seen any nests in stag-headed oaks, all being in beeches.

In an early stage of the tree's decline there is a sufficiency of healthy, pliant branches for the Rooks to nest on in a normal manner and for the provision of a leafy canopy adequate to conceal the nests during the period of brood-care. In the middle stage the whole tree is stag-headed and there are no pliant branches. The nests are built on rigid forks, close to the main stem, at a level which is much lower than normal, and the moribund branches develop so few leaves that the nests are more or less exposed during the period of brood-care. In the penultimate stage of dying the tree has only a single living branch. This branch arises from the trunk fairly low down and carries at its summit a scanty brush of stems on which is placed the nest. Few leaves come out from the brush and they fail to hide the nest. In two instances of this nature the results have been successful, although in advance the appearance of the nests suggested speculative building. Indeed, nesting in stag-headed trees, as far as I have observed it, has been devoid of accident, and it is noteworthy that all the stag-headed trees I have

been watching survived without injury the great gales of January 28th and April 20th, 1927, when many apparently healthy trees were blown down.

In 1927 eight nests were noted in solid forks of stag-headed beeches. Seven of these nests produced young. The eighth nest was at the lowest level and was abandoned presumably on account of its poor elevation. There were also about twenty nests in other stag-headed trees, but these nests were placed in healthy parts of the trees.

It is thus evident that Rooks do not necessarily nor immediately desert a tree when manifest decay sets in at the top of the tree. It is also clear that the presence of pliant, healthy branches on which to build, and the unfolding of an adequate leafy canopy to hide the nest during the period of brood-care, two of the supposed nesting requirements of Rooks, are not essential to success in breeding. A full canopy may be necessary to protect the young in the nest from the sun's heat. But nesting in bare or nearly bare stag-headed trees disproves the supposition. Possibly, changed conditions of existence have made the canopy unnecessary. Formerly it may have served a useful purpose, for Bechstein tells us that in his time, at the end of the 18th century, the young were eagerly sought by the Goshawk, the Sparrowhawk and by Owls (*Naturgeschichte*, II, 1210: 1805). As is well known, certain trees continue to be occupied year after year by Rooks, and it is inferred that the same birds or their descendants nest annually in the same tree. Perhaps attachment to site, as well as absence of danger, leads each tree-group of Rooks to persist in occupying its own tree, even after the tree becomes stag-headed and moribund.

GEORGE SHIELD. 1804—1880.

BY

HUGH S. GLADSTONE, M.A., M.B.O.U.

It is only recently that this author's work has been brought to prominent notice: a copy of part of his projected *Ornithologia Britannica* having been sold at Messrs. Sotheby's on May 8th, 1922, which, at the time, was regarded as unique.

George Shield was born in Tweedmouth about 1804, and eventually found his way from Berwick to London, where he obtained employment as a tailor. His health, however, broke down and after a few years he settled, with his wife, at Wooler, where he carried on his trade. He devoted much of his time to rambles in the Cheviots and visits to such places as St. Abb's Head and the Farne Islands. At about the age of forty he retired from his business of tailor and thereafter devoted himself to the study of Natural History. Without instruction he acquired the art of drawing and etching upon steel, as well as mastering the craft of taxidermy. He gained local popularity in Wooler as a lecturer, not only on Ornithology but also on such diverse subjects as Astronomy, Electricity, Geology and Races of Men. A friend and frequent correspondent of John Mackay Wilson—the author of *Tales of the Borders*—he became himself a noted narrator of a story, and is said to have “enchained, as by a spell, a youthful audience.” At one time he appears to have contemplated the publication of a book on British birds on a scale to rival the works of Selby and of Audubon. The idea was perhaps too grandiose to find favour among the publishers, but some of the plates which had been finished were published as engravings and as such still adorn the walls of a considerable number of houses in his native county. They were all sketches from the life and were—or, at least, some of them—remarkable for their fidelity to nature, besides being of no little artistic merit, and were highly appraised by Dr. James Hardy, the Hon. Secretary of the Berwickshire Naturalists' Club. For some years he busied himself in writing an “Exposition of the Prophecies of Daniel and St. John,” but none of his papers ever saw the light of publication. The ingenuity and research of the man, who by nature was quiet and unassuming, is made evident by

this short notice, and he died on January 29th, 1880, in his seventy-sixth year*.

Reference has already been made to George Shield's projected work on British birds, a specimen of which was sold at Messrs. Sotheby's on May 8th, 1922, when the opportunity was taken to make the following collation:—

ORNITHOLOGIA / BRITANNICA / BY GEORGE SHIELD / Part . . . / The above is the title printed in black on pale-brown wrappers which measure 39 × 26 ins. There is no place of printing, letter-press, or date but this latter, which has been surmised as "*circa* 1830," may be as justifiably postponed to *circa* 1845.

The plates are coloured and each of them is lettered:—

Drawn from nature by Geo. Shield. Engraved by Alexr. T. Aikman, Edinr.

The plates, which are numbered, are bound in the following order:—

- XXVII. Redbreast. Great Titmouse, male and female.
Blue Titmouse, male and female.
- XX. Rough legged Buzzard, female.
- XXXIII. Spotted Flycatcher, male and female. Black Bird, male and female. Spotted Flycatcher, young.
- XXXII. Cormorant, of the first year.
- XIV. Peregrine Falcon, adult female.
- XII. Common Gallinule, male, female and young.

There is not a copy of George Shield's book in either of the British Museum Libraries, at Bloomsbury or at South Kensington, and it only remains to be added that the copy above described was sold for £13 to a private bidder; that a second (incomplete) copy was disposed of by Messrs. Sotheby on December 17th, 1924, for £6; that on July 20th, 1927, they sold a third copy (complete but lacking the wrappers) which realised £10; and that, in August 1927, Messrs. Quaritch advertised for sale a copy (with six plates) at £60, an offer which I believe was accepted by an American collector: *sic transit gloria*.

*An obituary notice of George Shield is said to have appeared in the *Newcastle Journal* in 1880, but I have been unable to find it and for the substance of this article I am indebted to Mr. George Bolam, whose knowledge of every one connected with the ornithology of the Borders is evinced in his *Birds of Northumberland and the Eastern Borders*: 1912.

RECOVERY OF MARKED BIRDS.

No.	Place and Date Ringed.	Place and Date Recovered.
CARRION-CROW (<i>Corvus c. corone</i>).		
74546	Near Coventry (Warwick.), 10.5.25, nestling, by F. Dipple.	Near Birmingham (Warwick.), 10.1.28, by F. R. Boucher.
27112	Near Skirwith (Cumb.), 24.5.26, nestling, by R. H. Brown.	Near where ringed, early April, 1927, by J. Wales.
79669	Canterbury (Kent), 4.6.26, young, by J. Orpwood for St. Edmund's N. H. Soc.	Near where ringed, 6.7.27, by A. F. Skinner.
ROOK (<i>Corvus f. frugilegus</i>).		
RR.1963	Harbledown (Kent), 8.5.27, young, by M. N. Hum- phreys for St. Edmund's N. H. Soc.	Near Faversham (Kent), 12.2.28, by G. J. Longstaff.
JACKDAW (<i>Colæus m. spermologus</i>).		
78246	Near Leamington (War- wick.), 25.12.25, ad., by Miss J. M. and Mr. P. K. Chance.	Near where ringed, May, 1927, by ringer.
79621	Ditto nestling, 27.5.26.	Near where ringed, Jan. 1928, by W. A. Lovell.
RR.38	Craggs of Lundie (Forfar.), 5.6.26, nestling, by T. L. Smith.	Where ringed, 29.7.27, by Mrs. A. Dair.
STARLING (<i>Sturnus v. vulgaris</i>).		
Y.1885	Aberargie (Perth.), 14.6.24, young, by J. Robertson for A. H. R. Wilson.	Dundee (Forfar.), 24.12.27, by J. Bartholomew.
Y.9389	Eton (Bucks.), 31.12.25, ad., by A. Mayall.	Near where ringed, Nov., 1927 (dead some time), by J. Hawkins and A. Gurney.
X.2401	Near Gt. Budworth (Ches.), 17.12.25, ad., by A. W. Boyd.	Worcester, 3.9.27, by B. Adlington.
W.5094	Ditto 22.1.27.	Near where ringed, 21.12.27, by Mr. Woodcock, per ringer.
X.2287	Carlisle (Cumb.), 6.12.25, ad., by J. N. D. Smith.	Where ringed, 24.5.27 ; 27.11.27, by ringer ; again released.
X.2293	Ditto 10.12.25.	Ditto 22.5.27 ; 29.11.27.
X.3276	Ditto 3.9.26.	Ditto 1.11.26 ; 13.5.27, caught on nest on latter date.
X.3279	Ditto 4.9.26.	Ditto 29.5.27 ; 29.11.27.
X.3278	Ditto ditto.	Ditto 27.11.27.
X.3281	Ditto 18.10.26	Ditto 12.11.27.
X.3290	Ditto 20.1.27	Ditto 26.11.27.

No.	Place and Date Ringed.	Place and Date Recovered.
STARLING (<i>contd.</i>).		
X.3337	Broughty Ferry (Forfar.), 26.1.26, ad., by T. L. Smith.	Blairgowrie (Perth.), 10.9.27, by Mrs. J. Kirkaldy.
Y.5730	Prestbury (Ches.), 25.12.26, ad., by R. M. Garnett.	Where ringed, 21.11.27, by ringer.
W.3889	Near Leamington (War- wick.), 18.5.27, nestling, Miss J. M. and Mr. P. K. Chance.	Bridgwater (Somerset.), 31.12.27, by C. Stagg per G. Francis.
GREENFINCH (<i>Chloris ch. chloris</i>).		
B.3698	Near Gt. Budworth (Ches.), 10.1.25, ad., by A. W. Boyd.	Where ringed, twice Dec., 1927, by ringer.
D.3233	Ditto 3.11.25.	Ditto Jan., May, twice Dec., 1926; three times Jan.; May, Nov., three times Dec., 1927; 9.2.28.
D.5278	Ditto 15.6.26.	Ditto 8.2.28.
E.9653	Ditto 4.3.27.	Ditto 21.12.27; 28.1.28.
D.7991	Holmwood (Surrey), 10.6.26, ad., by H. B. P. Kingham.	Ditto 23.1.28; 11.3.28.
D.7992	Ditto 13.6.26.	Ditto 27.3.27.
D.8029	Ditto 15.6.26.	Ditto, twice March, 1927.
D.8036	Ditto 17.6.26.	Ditto, Jan., twice March; June, 1927.
E.6864	Ditto 20.6.26.	Ditto 27.2.27; 12.6.27.
E.9893	Ditto 2.1.27.	Ditto 5.6.27; 8.6.27.
D.6978	Near Dundee (Forfar.), 10.6.26, nestling, by Miss E. C. Sharp.	Ditto, twice May; 4.6.27.
F.1403	Malvern (Worcs.), 2.6.27, nestling, by P. E. A. Morshead.	Thorncliffe, Gt. Malvern, 28.11.27, by Mrs. I. F. Wyley.
REDPOLL (<i>Carduelis l. cabaret</i>).		
F.6849	Kirkconnel (Dumfries.), 28.6.27, nestling, by T. K. Craven.	Near Haltwhistle (Northumb.), 18.10.27, by T. Ridley, per <i>Cage Birds</i>
LINNET (<i>Carduelis c. cannabina</i>).		
D.8437	Near Pyrford (Surrey), 18.5.26, nestling, by Mrs. L. E. Taylor.	East Horsley (Surrey), 4.8.27, by R. S. Craig.
E.3127	Sandford-on-Thames (Ox- ford.), 8.6.27, young, by A. K. Gibbon for Oxford Orn. Soc.	Arengosse (Landes), France, 30.10.27, by L. Lagoffun; again released.
CHAFFINCH (<i>Fringilla c. cælebs</i>).		
A.8477	Grayshott (Hants.), 22.6.23, nestling, by Mr. and Mrs. R. O. Blyth.	Where ringed, 19.2.27, by ringer.
D.4826	Carlisle (Cumb.), 14.12.25, ad., by J. N. D. Smith.	Ditto 11.7.27.
D.3301	Near Gt. Budworth (Ches.), 28.12.25, ad., by A. W. Boyd.	Ditto, 15.6.26; March, June, July, 1927.

No.	Place and Date Ringed.	Place and Date Recovered.
CHAFFINCH (<i>contd.</i>).		
D.8002	Holmwood (Surrey), 29.4.26, ad., by H. B. P. Kingham.	Ditto 28.2.27; 19.6.27.
D.8004	Ditto ditto.	Ditto 28.2.27; 24.6.27.
D.7995	Ditto 14.6.26.	Ditto 23.3.27.
D.8034	Ditto 17.6.26.	Ditto 23.1.27; 2.3.27.
D.8035	Ditto ditto.	Ditto 2.3.27.
E.6866	Ditto young, 20.6.26.	Ditto 20.7.26; 28.2.27.
E.6873	Ditto 23.6.26.	Ditto 28.2.27.
E.6878	Ditto 26.6.26.	Ditto 28.3.27.
E.6896	Ditto 15.7.26.	Ditto 27.2.27.
E.6898	Ditto 16.7.26.	Ditto, twice Feb., 1927.
E.6900	Ditto 18.7.26.	Ditto 20.2.27.
E.9923	Ditto ad., 26.2.27.	Ditto 19.6.27.
YELLOW-BUNTING (<i>Emberiza c. citrinella</i>).		
A.9299	Near Gt. Budworth (Ches.), 1.2.24, ad., by A. W. Boyd.	Where ringed, twice Feb., 1924; 4.7.25; 10.2.28.
B.9113	Ditto 26.2.25.	Ditto, 15.5.26; twice July, 1927.
B.9178	Ditto 10.3.25.	Ditto 10.2.28.
B.9175	Ditto ditto.	Ditto, 5.7.25; 10.7.26; twice May, 1927; 11.1.28.
C.5722	Ditto 4.7.25.	Ditto 19.12.25; 28.7.27.
C.5784	Ditto 22.7.25.	Ditto 24.1.26; 10.7.27.
D.3327	Ditto 14.1.26.	Ditto, 17.5.27; twice July, 1927.
D.5100	Ditto 7.5.26.	Ditto 7.7.27.
E.4060	Ditto 1.7.26.	Ditto 21.1.27; 26.7.27.
D.7986	Holmwood (Surrey), 8.6.26, ad., by H. B. P. Kingham.	Ditto, twice June, 1926; 27.2.27; 27.3.27.
D.8033	Ditto 17.6.26.	Ditto 7.3.27.
E.6865	Ditto 20.6.26.	Ditto 20.2.27; 23.3.27.
E.6876	Ditto young, 25.6.26.	Ditto 20.3.27.
E.6886	Ditto ad., 28.6.26.	Ditto 23.1.27; 7.3.27.
D.3171	Penrith (Cum.), 19.5.26, young, by H. J. Moon.	Near where ringed, Jan. 1928, by A. Furness, per ringer.
PIED WAGTAIL (<i>Motacilla a. yarrellii</i>).		
E.4886	Harbledown (Kent), 12.7.26, young, by J. Orpwood for St. Edmund's N.H. Soc.	Near where ringed, 7.9.27, by Frank Lewis.
E.9580	Near Gt. Budworth (Ches.), 14.2.27, ad., by A. W. Boyd.	Where ringed, 19.12.27, by ringer.
F.3088	Scone Estate (Perth.), 12.6.27, nestling, by P. Clark for Lord Scone.	Victoria Court (Perth.), 19.1.28, M. McLeod, per J. Ritchie.
F.5687	Bidston, Birkenhead (Ches.), 14.7.27, young, by H. Went.	Milfontes, S.W. coast Portu- gal, 4.1.28, by H. E. O. Gilbert.
WILLOW-WARBLER (<i>Phylloscopus t. trochilus</i>).		
E.1719	Grayshott (Hants.), 13.6.26, nestling, by Mr. and Mrs. R. O. Blyth.	Where ringed, reported Jan., 1927, but bird may have been dead some months.

No.	Place and Date Ringed.	Place and Date Recovered.
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SONG-THRUSH (*Turdus ph. clarkei*).

Z.6715	Ambleside (Westmorland), May, 1924, young, by H. J. Moon.	Windermere, 31.10.27, by W. Newby.
Y.7028	Bridge of Earn (Perth.), 9.5.25, young, by A. H. R. Wilson.	Near where ringed, August, 1927, by J. T. Davidson.
X.1735	Near Gt. Budworth (Ches.), 6.12.25, ad., by A. W. Boyd.	Where ringed, 19.12.27, by ringer.
X.2422	Ditto 3.1.26.	Ditto, twice Jan., 1926; 12.11.27.
Y.6518	Uplawmoor (Renfrew.), 24.4.26, nestling, by T. Kerr.	Bushmills (Antrim), Ireland, Feb., 1928, S. Henry and J. M. Hemphill.
X.1997	Scone Estate (Perth.), 29.4.26, nestling, by Lord Scone.	Denmarkfield, Luncarty (Perth.), 10.6.27, by ringer.
X.7585	Near Dundee (Forfar.), 5.5.26, nestling, by Miss E. C. Sharp.	Newport (Mayo), Ireland, 25.11.27, by F. Chambers.
Y.5738	Prestbury (Ches.), 12.2.27, ad., by R. M. Garnett.	Where ringed, 3.7.27, by ringer.
V.1564	Near Birkenhead (Ches.), 14.5.27, young, by H. Went.	East End, Kilkee (Clare), Ireland, 28.12.27, by H. Murnane.
W.4891	Malvern (Worcs.), 8.5.27, young, by P. E. A. Mors- head.	Near where ringed, 12.11.27, by E. H. Wheelwright.
V.5248	Penrith (Cumb.), June, 1927, young, by H. J. Moon.	Kilcumney Hill (Kilkenny), Ireland, Jan., 1928, by Mrs. J. Butler.

RING-OUZEL (*Turdus t. torquatus*).

LL.88	Dent Fell (Yorks.), 23.5.27, by H. W. Robinson.	Eugui (Navarra), Spain, 14.9.27, by T. Mendizabel.
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BLACKBIRD (*Turdus m. merula*).

Z.2981	Wistaston (Ches.), 25.12.23, ad., by Miss E. H. I. Mayne.	Near Crewe (Ches.), 1.3.28, by J. E. James.
Z.9538	Cheadle (Staffs.), 15.6.24, nestling, by J. R. B. Masefield.	Where ringed, 16.12.27, by ringer.
59421	Bluntisham (Hunts.), 30.5.24, nestling, by E. Peake.	Colne (Hunts.), 23.11.27, by G. E. Gibbs.
B.5104	Torrance (Stirling), 11.5.24, young, by J. Bartholo- mew.	Where ringed, 12.2.28, by ringer.
B.8351	Ditto 7.5.25.	Stranraer (Wigtown.), 24.12.27, by A. Ewing.
D.8729	Ditto 10.6.26.	Morpeth (Northumb.), March, 1927, by A. Wheelans.

<i>No.</i>	<i>Place and Date Ringed.</i>	<i>Place and Date Recovered.</i>
BLACKBIRD (<i>contd.</i>).		
Y.3388	Broughty Ferry (Forfar.), 23.12.25, ad., by T. L. Smith.	Gourdon, Montrose (Forfar), 24.12.27, by D. Wyllie.
X.3525	Kinclune, Kingoldrum (Forfar.), 26.9.26, immat., by T. L. Smith.	Richhill, Portadown (Armagh.), Ireland, 30.11.27, by A. E. Smith.
57688	Near Gt. Budworth (Ches.), 4.12.23, ad., by A. W. Boyd.	Where ringed, twice Dec., 1923; 20.3.24; twice Nov., Dec., 1925; 17.1.26; 15.2.27; 8.12.27; re- ringed W.5434.
W.5430 (57711)	Ditto	19.2.24. Ditto, twice Nov., 1925; three times Dec., 1927.
57714	Ditto	ditto. Ditto, 21.12.27; re-ringed W.5439.
57732	Ditto	2.3.24. Ditto, 5.12.25; 21.12.27; re- ringed W.5437.
Y.5404	Ditto	20.11.25. Ditto 21.12.27
Y.5428	Ditto	3.12.25. Near where ringed, 21.11.27, by P. Moore, per ringer.
Y.5431	Ditto	4.12.25. Where ringed, 21.12.27, by ringer.
X.2432	Ditto	16.1.26. Ditto, twice Dec., 1927.
W.5404	Ditto, nestling	22.6.27. Ditto 21.12.27.
W.5418	Ditto, young.	8.7.27. Ditto, three times Dec., 1927.
X.2325	Carlisle (Cumb.), 14.12.25, immat., by J. N. D. Smith.	Ditto 12.6.27.
X.3723	Ditto, ad.,	12.5.27. Ditto 26.11.27.
Y.5702	Prestbury (Ches.), 27.6.27, nestling, by R. M. Garnett.	Ditto 8.12.26.
X.6760	Holmwood (Surrey), 10.8.26, young, by H. B. P. Kingham.	Ditto 23.1.27.
W.8351	Trevol (Cornwall), 20.4.27, young, by M. N. Humphreys for St. Edmund's N. H. Soc.	Ditto Feb., 1928.
W.9685	Uplawmoor (Renfrew.), 6.5.27, nestling, by T. Kerr.	Kilmurry, McMahon (Clare), Ireland, 19.12.27, by J. M. Carniskey.
V.1107	Holt (Norfolk), 5.5.27, young, by A. P. Meiklejohn.	Near where ringed, 15.11.27, by R. Deterding.
W.6957	Bishop's Stortford (Herts), 22.5.27, nestling, by C. P. Clarke for Lon. N. H. Soc.	Where ringed, 21.10.27, by A. Andrews.
W.6701	Penrith (Cumb.), May 1927, young, by H. J. Moon.	Near where ringed, 10.10.27, by G. Bolton, per ringer.
W.6710	Ditto ditto.	Where ringed, 7.11.27, by G. Moffat.

No.	Place and Date Ringed.	Place and Date Recovered.
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WHEATEAR (*Enanthe æ. ænanthe*).

B.6839	Port of Menteith (Perth.), 8.6.26., young, by Sir S. Bilsland.	Chaves (Traz - os - Montes), Portugal, Jan., 1927 (date uncertain), by F. A. Mello.
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REDBREAST (*Erithacus rubecula*).

A.4925	Ullswater (Westmorland), 5.6.23, young, by H. J. Moon.	Near where ringed, early Sept., 1927, by J. D. Fleming, per ringer.
F.2290	Ditto July 1926.	Newton Rigg, Penrith (Cumb.) 1.12.27, by W. Ballardie.
E.8015	Ditto, ad., 1.1.27.	Near where ringed, 17.2.28, by J. Cooper, per ringer.
E.5029	Ditto May 1927.	Where ringed, 27.2.28, by ringer.
B.2107	Cheadle (Staffs.), 4.3.24, ad., by J. R. B. Masefield.	Ditto 18.12.27.
C.8008	Ditto 15.9.25.	Ditto 12.2.27 ; 30.12.27.
D.2375	Eton (Bucks.), 18.7.25, ad., by A. Mayall.	Ditto 12.2.28.
D.4823	Carlisle (Cumb.), 5.12.25, ad., by J. N. D. Smith.	Ditto 11.11.27.
D.3250	Near Gt. Budworth (Ches.), 22.11.25, ad., by A. W. Boyd.	Ditto Jan., Nov., 1927 ; Jan., Feb., 1928.
E.4229	Ditto 7.11.26.	Ditto 11.3.28.
E.9483	Ditto 28.11.26.	Ditto, twice Dec., 1927.
E.9612	Ditto 21.2.27.	Ditto, three times Dec., 1927.
F.8879	Ditto 3.8.27.	Ditto 26.1.28 ; 13.2.28.
F.8899	Ditto 21.10.27.	Ditto, four times Jan., 1928.
D.7772	Prestbury (Ches.), 30.1.27, ad., by R. M. Garnett.	Ditto 13.11.27.
E.2416	Ditto nestling, 24.6.27.	Ditto, early Jan., 1928, by J. B. Langley.
D.6065	Alloway (Ayr.), 13.5.27, ad., by B. B. D. Nicholson.	Near where ringed, early Oct., 1927, by E. R. Paton.
F.4401	Dorking (Surrey), 15.7.27, nestling, by H. B. P. Kingham.	Where ringed, 29.12.27, by C. H. Mortimer.

HEDGE-SPARROW (*Prunella modularis*).

A.2053	Near Gt. Budworth (Ches.), 12.3.23, ad., by A. W. Boyd.	Where ringed, 19.3.23 ; Nov., Dec., 1924 ; Jan., Dec., 1925 ; April, May, 1926 ; Jan., Oct., 1927 ; Jan., 1928.
B.3612	Ditto 17.8.24.	Ditto, 21.8.24 ; 3.10.25 ; 15.1.26 ; Nov., Dec., 1927 ; Jan., 1928.
C.6570	Ditto 25.8.25.	Ditto, 24.11.25 ; Oct., Dec., 1927 ; Jan., 1928.
E.4223	Ditto 6.10.26.	Ditto, March, May, 1927 ; Jan., 1928.

No.	Place and Date Ringed.	Place and Date Recovered.
HEDGE-SPARROW (<i>contd.</i>).		
E.4224	Near Gt. Budworth (Ches.), 6.10.26, ad., by A. W. Boyd.	Where ringed, Nov., Dec., 1926; Jan., April, Sept., Nov., Dec., 1927.
E.4236	Ditto 17.11.26.	Ditto 7.10.27.
E.4239	Ditto 20.11.26.	Ditto 7.8.27.
E.9492	Ditto 23.12.26.	Ditto 21.12.27.
F.1154	Ditto nestling, 4.5.27.	Ditto 27.1.28
C.6145	Prestbury (Ches.), 1.9.25, ad., by R. M. Garnett.	Ditto 6.10.27; 7.11.27.
D.7739	Ditto 22.8.26.	Ditto, Jan., Feb., Oct., Nov., 1927.
WREN (<i>Troglodytes t. troglodytes</i>).		
F.6186	Bishop's Stortford (Herts.), nestling, by C. S. Clarke for Lon. N. H. Soc.	Where ringed, 28.1.28 (dead some time), by G. N. T. Jones.
E.8855	Cumdivock (Cum.), 31.10.26, ad., by R. H. Brown.	Ditto 15.12.26; 13.1.27.
DIPPER (<i>Cinclus c. gularis</i>).		
X.7148	Near Balerno (Midlothian), 31.5.26, nestling, by R. G. Willan.	Gladhouse Reservoir (Mid- lothian), 27.11.27, by W. Tait.
SWALLOW (<i>Hirundo r. rustica</i>).		
6067	Hafod, Trefnant (Denbigh.), 11.6.24, young, by W. M. Congreve.	Saltfleet (Lincs.), mid-Aug., 1927.
C.8525	Llanstephan (Carmarthen.), 4.8.25, nestling, by J. F. Thomas.	Carmarthen, summer, 1927. by A. Harris
MARTIN (<i>Delichon u. urbica</i>).		
C.8163	Glen Esk (Forfar.), 13.7.25, young, by H. G. Watson.	Arbirlot, Arbroath (Forfar.), 1.6.27, by J. Ritchie.
D.4515	Ditto 9.7.26.	Near where ringed, in its nest, 20.7.27, by ringer.
E.3173	Ditto 12.7.26.	Ditto, 25.7.27, by D. Grieg, per ringer.
E.6210	Near Leamington (War- wick.), 6.7.26, nestling, by Miss J. M. and P. K. Chance.	Ditto, 7.7.27, by T. Barnett.
SWIFT (<i>Apus a apus</i>).		
B.1983	Near Leamington (War- wick.), 14.7.24, ad., by P. K. Chance.	Where ringed, 2.7.27, by ringer.
C.6288	Ditto	Ditto
C.6290		
C.6291		
C.7904	Ditto	Ditto
C.9876		
E.6141	Ditto	Ditto
E.6145		
F.3181	Shenfield (Essex), 4.8.27, young, by G. P. Pollitt.	Woodbridge (Suffolk), 21.8.27, by E. A. Ward.

(To be continued.)

NOTES

THE 1927 IRRUPTION OF THE CROSSBILL*.

ENGLAND AND WALES.

DENBIGHSHIRE.—Major W. M. Congreve informs us that early in January, 1928, a party of half-a-dozen were seen in larch by Mr. H. Davey at Maes Mynan Hall on the borders of Flintshire near Caerwys.

HEREFORDSHIRE.—During July and up to mid-September, when they left, Mr. N. M. Thornycroft saw ten to twelve near Hereford on spruce trees.

Mr. B. W. Tucker, as editor of the Annual Report of the Oxford Ornithological Society on the Birds of Oxon, Berks and Bucks, has received notes from this area of which the following are additional to those already published in *British Birds*.

OXFORDSHIRE.—Single bird caught in wire-netting supporting sweet peas, Bloxham, N. Oxon, July 21st (O. V. Aplin).

A number seen by various observers at Headington, near Oxford, from early August onwards. They appear to have fed mainly on larches and other conifers, but Mr. G. Tickner on August 9th or 10th watched three young birds and a female feeding on plum trees, turning over the leaves evidently in search for aphids or other insects.

Reported also at Checkendon (H. R. Beeton *per* J. L. Hawkins).

BERKSHIRE.—Observed repeatedly round about Boar's Hill, near Oxford, from August 14th onwards, generally in little parties of about two to four or five. Observed on spruces, apparently feeding on "mealy-bug," and on pear (G. Tickner).

One red cock and three females at Reading in August, apparently feeding on berries (or shoots?) of yew, and three a few days later on pine in same locality (J. L. Hawkins).

Three reported on larches at King Standing Hill, Cholsey, August 16th (J. L. Hawkins); perhaps same locality as reported in *British Birds*, *antea*, p. 92, or at any rate near it.

BUCKINGHAMSHIRE.—Three in belt of firs by roadside near Ivinghoe, October 21st (C. Oldham).

Ten in hornbeam near Hambleden, October 16th; four October 31st; seven November 6th in larch. One red bird seen on each occasion (H. J. R. Pease).

* For previous notes see *antea*, pp. 90-3, 121-7, 153-5, 175-7, 195-6, 227-9.

SOMERSETSHIRE.—Mr. B. W. Tucker sends the following summary of observations by himself and other correspondents.

Mr. D. B. Grubb saw a party of eight to ten at Winscombe from late July to early September, all hens or immature, feeding mainly on Scots and Austrian pine, but also on other conifers and wild cherries.

On an estate in west Somerset, numbers were estimated at about fifty to seventy in early July. A flock of about two dozen was watched here by Messrs. E. W. Hendy and B. W. Tucker on July 29th, feeding on larch cones. Numbers gradually decreased up to the New Year, after which small parties of from four to nine have been observed at intervals up till at any rate February 29th. The keeper on this estate asserts that Crossbills were present also in the summers of 1925 (about half-a-dozen), 1926 (about a dozen) and 1927 (about a score), a sudden increase taking place in July. The possibility is thus introduced that a small unknown breeding colony may have existed here prior to the 1927 invasion.

In August a number were established at Culmhead, Blackdown Hills, feeding almost entirely on larches. One juvenile was watched feeding on thistle seeds. One dull red bird observed; all the rest female or young. Others, apparently on the move, were noted in the same district as follows: two, Castle Neroche, and two near Robin Hood's Butts on Somerset-Devon boundary, August 3rd; several, Pitminster, August 5th.

A party of six were reported to Mr. A. R. Robinson near Bath in August, and two were reported near Ashcott.

In the Exmoor district Mr. N. G. Hadden reports: one, Porlock Weir on August 4th; small flock of six to eight, Pitcombe, August 6th, and small flock near Cloutsham in September. Mr. E. W. Hendy watched a small flock in the same district on various dates between January 13th and 19th. Sixteen was the greatest number observed. They fed entirely on larch cones. Two brilliantly red cocks noted and two less brilliant, the rest female or immature.

At Lympsham (locality already reported, *antea*, p. 92) a bird was watched by Major H. G. F. Royle through glasses, attacking the outer thorny sheath of fully-formed fruit of horse-chestnut on the tree.

On January 22nd nearly a score were watched by Messrs. W. R. Taylor, A. C. Leach and L. A. Hawkins in larches at Long Ashton, where they were searched for unsuccessfully in the late autumn and winter. None detected in this locality since.

DEVONSHIRE.—On January 9th, 1928, Mr. W. Walmesley White saw six at Budleigh Salterton.

WILTSHIRE.—From September 23rd to October 29th (after which they were not seen) Mr. J. F. Wynne saw small parties near Swallowcliffe.

ISLE OF WIGHT.—On August 24th Mr. J. F. Wynne saw a small party at Godshill, and on September 12th one flying out to sea eastward at Shanklin.

THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

IN the following cases during 1927, from west Sussex, the period of incubation has been calculated from the day on which the last egg was laid until the day or days of hatching.

The fledging-period from the day or days of hatching until the day or days of departure from the nest:—

Species	Incuba- tion- period in days	Fledging- period in days	Total in days	Period of year of observation	No. of eggs in clutch	No. of young to leave nest
Starling						
(<i>S. s. vulgaris</i>) ...	12	21	33	April-May	5	2
Starling ...	12	—	—	April-May	3	none
Greenfinch						
(<i>C. chloris</i>) ...	14	17	31	May-June	4	4
Cirl Bunting						
(<i>E. cirrus</i>) ...	—	—	23	July-August	3	3
Cirl Bunting ...	—	—	23 or 24	July-August	3	2
Woodlark						
(<i>L. arborea</i>) ...	—	11	—	May	4	3
Reed-Warbler						
(<i>A. scirpaceus</i>) ...	—	13-14	—	June	4	4
Sedge-Warbler ⁽¹⁾						
<i>A. schænobaenus</i>)	12-13	10-11	23	May-June	5	5
Sedge-Warbler ⁽¹⁾ ...	—	12-13	—	July	4	4
Song-Thrush						
(<i>T. clarkei</i>) ...	12-13	—	—	March-April	4	?
Song-Thrush ...	12-13	15-16	28	March-April	4	2
Song-Thrush ...	—	—	26	April-May	5	5
Song-Thrush ...	12	14	26	April-May	4	4
Song-Thrush ...	12	12-13	24-25	April-May	4	2
Blackbird						
(<i>T. merula</i>) ...	13	—	—	March	3	none
Robin ⁽²⁾						
(<i>E. r. melophilus</i>)	15	12	27	April-May	5	2
Robin ⁽²⁾ ...	15	14	29	May-June	5	1
Hedge-Sparrow						
(<i>P. m. occidentalis</i>)	13	—	—	April	3	none
Hedge-Sparrow ...	12-13	—	—	June-July	4	none
Cuckoo (<i>C. canorus</i>)	—	22 or 23	—	July	1	1
Stone-Curlew						
(<i>B. ædicnemus</i>) ...	25-26	—	—	May-June	2	2

⁽¹⁾ First and second broods of same pair of birds.

⁽²⁾ First and second broods of same pair of birds.

RAYMOND CARLYON-BRITTON.

THE two cases concerning the fledging-period of the Lapwing were obtained through two birds which were ringed as day-old nestlings and caught again when fledged.

		Incubation- Period. Days.	Fledging- Period. Days.
Greenfinch (<i>Chloris ch. chloris</i>)	...	13	12
Linnet (<i>Carduelis c. cannabina</i>)	...	11	13
Garden Warbler (<i>Sylvia borin</i>)	...	11	10
Whitethroat (<i>S. c. communis</i>)	...	—	11
Song-Thrush (<i>Turdus ph. clarkei</i>)	...	13	13
Redstart (<i>Phœnicurus ph. phœnicurus</i>)	...	—	12
Tawny Owl (<i>Strix a. sylvatica</i>)	...	30	29-31
Merlin (<i>Falco c. æsalon</i>)	...	—	27
Lapwing (<i>Vanellus vanellus</i>)	...	—	30 and 33

R. H. BROWN.

“ASSISTED PASSAGE” OF GREENFINCHES ACROSS ATLANTIC.

AN interesting case of an “assisted passage” has recently come to my notice. On October 9th, 1927, the S.S. “Alaunia” started on her westward voyage from Southampton, and on the same day four Greenfinches (*Chloris c. chloris*) flew on board. One of them disappeared during the voyage, but three remained on the ship until the shores of Newfoundland were sighted, when they apparently flew ashore. They roosted during the voyage on a band round the funnel, on the lee-side, being fed by my informant (a passenger on the vessel) and provided with water by one of the stewards. The weather throughout the voyage was unusually fine.

Such definite evidence that quite small birds can successfully cross the Atlantic in this manner, under favourable conditions, at least justifies the suspicions already entertained regarding the appearance of other species on both sides of the Ocean.

CHARLES E. ALFORD.

[Such “assisted passages” must depend upon the ability of the bird to obtain food on board the ship. Even a partially assisted voyage at so comparatively slow a rate of progress without food must endanger the bird becoming exhausted before it reaches land.—EDS.]

RUSTIC BUNTING IN ORKNEY.

ON October 13th, 1927, I received from a friend, Mr. A. Wood, Finstown, Orkney, a small Bunting which had been killed and, fortunately, brought home by the cat. Naturally

it was somewhat damaged, but with care, it made a fairly presentable specimen.

On dissection, it proved to be a male in good condition, the skin being thickly lined with fat. So far as I was able to judge it was an immature Rustic Bunting (*Emberiza rustica*), but owing to unavoidable circumstances I was unable to get this verified until February, 1928.

I then forwarded the specimen to Mr. Witherby, who very obligingly examined it for me and confirmed the identification.

JOS. ARMITAGE.

[Mr. Wood informs us that it was on some day between the 3rd and 7th of October that he found his nieces about to bury a bird killed by a cat. As the bird was unknown to him he forwarded it to Mr. Armitage.—EDS.]

PEREGRINE FALCON ATTACKING HERON IN WILTSHIRE.

DURING the afternoon of February 16th, 1928, I was climbing a tall beech in a heronry in Savernake Forest, and had reached a height of some 40 ft., when my attention was attracted by harsh cries and suddenly a Heron (*Ardea c. cinerea*) and what very soon proved itself to be a Peregrine Falcon (*Falco peregrinus*) swept into view over the trees. I had, a few minutes before, frightened all the Herons away and apparently only one had been close enough to notice the approach of the Falcon. At any rate, I had a good view, owing to my height, of a battle royal between the infuriated Heron and the Peregrine, which lasted for about two minutes. The Falcon returned to the attack again and again, much to the discomfiture of the Heron, which, redoubling its cries, twisted itself into most remarkable positions in its efforts to strike at its antagonist. However, the Falcon soon retired, though no other Herons appeared.

The speed, size, long arched wings, silvery-grey appearance above and black on the head, proclaimed the intruder as a Peregrine Falcon, a species not often recorded in the Marlborough district, the circumstances of this record being especially interesting.

W. D. SHAW.

WHITE-TAILED EAGLE IN BEDFORDSHIRE.

On February 20th, 1928, "a very large Hawk" was reported to me as having been seen in our park at Woburn for the first time. On the 22nd I had a very good view of it myself, and it has been seen daily by other observers or myself up to the present time, March 11th.

It is, I think, undoubtedly an immature Sea-Eagle (*Haliaeetus albicilla*), the only thing making identification at all doubtful, being that it shows absolutely no white in flight.

The legs are bright yellow and not feathered on the tarsus, the bill is heavy, a narrow band of bright yellow at the base shading to a bluish-horn colour. The tail is almost triangular in shape and not squared. The general body-colour is an ashy-brown with darker markings, and primaries, secondaries and tail-feathers are a very dark brown. The nape is also a darker brown than the general body-colour.

It is fond of sitting on the banks of our ponds, and swoops down over the waterfowl, but has not been known to kill any.

It has a slow heavy flight, only getting high in the air if it becomes suddenly aware of the proximity of a human being.

It has lost some feathers in the left wing by which it might be identified if it meets with its probable fate when it leaves us, it being so unwary that I have been within shot of it on several occasions.

M. BEDFORD.

[Mr. J. W. Bertram Jones states in the *Field* (8. III., '28, p. 390) that he identified a Sea-Eagle early in February in Essex. The bird was striking at wild ducks on a pond, and was seen at short range, but no details of its appearance are given. An Eagle, identified as a Golden Eagle, and apparently a young bird, is stated in *Cage Birds* to have been shot early in February near Grimsby in Lincolnshire, and had been previously watched by Mr. R. May and others, who were able to note that the tarsus was feathered to the base of the toes and that there was a dark band below a white patch on the tail. Mr. F. S. Chapman informs us that a friend of his saw an Eagle (? species), which was very dark with the tail rather lighter and several feathers missing from it, at the beginning of February at Freckenham, West Suffolk.—EDS.]

GARGANEY IN THE OUTER HEBRIDES IN NOVEMBER.

SHOOTING on November 10th, 1927, on Benbecula, a single duck "came over" during the driving of a loch which proved to be a female Garganey (*Anas querquedula*).

The bird, which was in good condition, was sent to Mr. F. Sergeant, of Oban, for preservation. It would be interesting to know if a Garganey has ever been seen before in the Outer

Hebrides at this time of the year, as surely it must be most unusual for this species of duck to be so far north in November.

H. E. DAVID.

[So far as we know the Garganey has not been recorded as having occurred in the Outer Hebrides at any time.—EDS.]

EARLY NESTING OF LITTLE GREBE IN HERTFORDSHIRE.

ON February 27th or 28th, 1928, one of the keepers at the Tring Reservoirs found on Wilstone Reservoir a nest with two eggs of the Dabchick (*Podiceps r. ruficollis*), and on March 4th, Miss Barclay-Smith and I saw the full clutch of four eggs, which the bird had just left. On March 11th the nest was forsaken, the water being frozen over from the shore to the edge of the reeds.

Two years ago a clutch of eggs, presumably from the same pair, was found about six to eight yards from the present site at an exceptionally early date. I was under the impression that I had sent a note of this to *British Birds*, but have evidently not done so, and now forget the exact date.

ERNST HARTERT.

[In the *Birds of Yorkshire*, II., pp. 747-8, it is recorded that Mr. J. W. Dent of Rilston Hall, near Harrogate, found on one occasion eggs in a nest on a pond near his house on March 3rd, 1897.—F.C.R.J.]

LAPWINGS IN LONDON.

ON March 12th, 1928, I counted a flock of forty-two Lapwings (*Vanellus vanellus*) feeding in a snowstorm on the cricket ground in Battersea Park. This must be an unusual occurrence for London.

H. A. F. MAGRATH.

WHITE LAPWING IN CHESHIRE.

IN the spring of 1926 a white Lapwing nestling (*Vanellus vanellus*) was hatched out on a meadow at the foot of the east Cheshire hills. When fully fledged this bird was the colour of burnt wood-ash, i.e., a very light blue-grey, but practically white. Possibly the change was due to the smoke which blows very frequently throughout the year over these hills from the Staffordshire Potteries.

In March, 1927, a Lapwing of similar colour appeared in exactly the same district and was presumably the same bird.

Although watched carefully throughout the season until July, when it disappeared, no evidence of its breeding was

noted either by myself or by two local watchers, though I ringed a light fawn-coloured nestling (L 9268) on the same breeding ground on June 26th, 1928.

The former bird generally roosted with four to six other Lapwings of ordinary colour on the hill-sides overlooking the breeding ground.

RICHARD E. KNOWLES.

TURNSTONE IN DERBYSHIRE.

DR. C. F. DRUITT informs me that while shooting on December 26th, 1927, near Swarkeston, a Turnstone (*Streptopelia interpres*) fell to one of the guns, while another rose and got away. The bird proved to be a female, and its stomach contained skins of large larvæ and some small pupæ. There is only one dubious record mentioned in the *Victoria History of the County of Derby*, but three were accidentally killed by striking telegraph wires on June 1st, 1906, and another is said to have been killed near Burton in the spring of 1908.

F. C. R. JOURDAIN.

LITTLE GULL IN HAMPSHIRE.

ON the afternoon of February 22nd, 1928, I noticed a small Gull hawking over a field on the neck of land connecting Hengistbury Head with the mainland. Its flight was unfamiliar, easy and rapid without the pronounced up and down movement of the Terns, and the dark under-surface of the wings was apparent even without the glass. After watching it for about five minutes it came close overhead and was evidently a Little Gull (*Larus minutus*) still in winter plumage. It then flew off in the direction of Christchurch Harbour mouth.

F. C. R. JOURDAIN.

GLAUCOUS GULL IN SUSSEX IN AUGUST.

ON August 5th, 1927, I saw a Glaucous Gull (*Larus hyperboreus*) at Pevensey Bay, Sussex. The bird was in company with Herring-Gulls, a Great Black-backed and two Lesser Black-backed Gulls. Its wings and back were very pale grey and the rest of the plumage pure white, and I think the bird must have been adult, in which case the date of its appearance is remarkable.

D. D. GODFREY.

BIRDS IN FOG.

To the Editors of BRITISH BIRDS.

SIRS,—It is well known that the sense of orientation in birds is apt to be confused by fog, and the following recent experience of Flight-Lieutenant Frank Long, R.A.F., stationed at Farnborough, is interesting as bearing upon this problem of the direction-sense in birds. He writes:—"During the foggy weather we had here at the end of February, a kite balloon was sent up above the fog to get certain meteorological data, and when it was about 1,500 feet up and 200-300 feet above the fog, a Pigeon came along and perched in the rigging, where it remained when the balloon was hauled down to the ground. It was utterly exhausted, apparently having been flying for ages above the fog and afraid to come down through it. Only after resting for some time was it able to fly away. Possibly a lot of birds perish by flying on and on above fog until they are too exhausted to go further, when they must fall, perhaps, into the sea. In anti-cyclonic weather, such as that at the time, when there is no wind on the ground, the wind just above the fog is generally blowing at a velocity of 30-40 m.p.h.; this would mean that a bird of the Pigeon species, if flying down wind, would be covering the ground at a speed of 80-90 m.p.h., that is taking a Pigeon's speed in still air at about 40 m.p.h. SYDNEY H. LONG.
31, SURREY ST., NORWICH.

A RECEDING MIGRATION.

To the Editors of BRITISH BIRDS.

SIRS,—Towards the end of February, 1928, notably on the night of the 19th, a strong migration of birds was passing over Carlisle in the normal spring direction (N.N.West); the birds recognized being Curlew, Ringed Plover, Lapwing, Oystercatcher, Sky-Lark and Common Gull. This movement followed on a spell of fine warm weather and was continued on the following two or three nights.

On March 10th I again heard a migration proceeding after a big drop in temperature, and to my surprise found that the birds were making in a direction directly opposite to that of the previous fortnight, *i.e.*, S.S.East. This occurrence was also noted by a friend, Mr. R. Robson of Grinsdale, a good observer, who noted the first flights on the 10th shortly after dark. The birds appeared to be in great haste and from the volume of sound to be in very close formation. Curlews seemed to be most in evidence.

This is the first occasion on which I have noted a return movement of this kind and as the following days were stormy with heavy snow fall that would appear to be the cause.

Has a similar phenomenon been noticed in other parts of the country?

THOS. L. JOHNSTON.

THE SMALLEST BOOK ON ORNITHOLOGY.

To the Editors of BRITISH BIRDS.

SIRS,—Since you have already published notes by me on this booklet (*antea*, Vol. XVIII., pp. 258-9 and 319), it may now be of interest to add that I have recently acquired another edition, bound in the original red calf, and published in 1812. This appears to tally with the description I have already given of the 1816 edition, but it is noticeable that a plate of an "Eagle" is included as a frontispiece. A careful examination of the 1810 and 1812 editions reveals that in the 1810

edition the first section (A) of eight leaves is complete without the "Eagle" frontispiece, whereas in the 1812 edition the "Eagle" frontispiece is part of the first section (A) of eight leaves. A similar critical examination of the 1816 French edition has led to the conclusion that it was published with a plate of an "Eagle" and that this is missing from the copy now in the Royal Scottish Museum, Edinburgh.

There is no copy of any edition of this booklet in the British Museum Library, which, however, contains the following 32mo books by Alfred Mills, all of which are bound in the original red calf: *Pictures of Roman History in Miniature, designed by A.M.*, 1809; *Pictures of English History . . . designed by A.M.* (2 vols.), 1811; *Biography of Eminent Persons . . . with portraits from designs by A.M.*, 1814; *Portraits of the Sovereigns of England from drawings by A.M.*, 1817.

There is no doubt that the booklet under discussion was one of a series of miniature books of which another, *Costumes of different Nations in Miniature*: 1814, is known to me; but to investigate this matter farther in your *Magazine* would doubtless be regarded as outside its legitimate scope.

HUGH S. GLADSTONE.

CAPENOCH, DUMFRIESSHIRE, *February, 22nd, 1928.*

REVIEW.

Birds of Western Canada. By P. A. Taverner (Victoria Memorial Museum Bulletin, No. 41.) pp. 380. 84 colour plates, and text figures. Ottawa.

MR. TAVERNER'S previous work on the *Birds of Eastern Canada* was a surprising production, but it is completely overshadowed by this new work, which shows a great advance in many ways on the earlier one. Like its predecessor it is published at a merely nominal price (75 cents unbound) and through its circulation, which we understand to have been already very large, should have a great educative influence on the Canadian public. The numerous coloured plates form a striking feature of the book. Many of the figures by Hennessey which appeared in the *Birds of Eastern Canada* have been retained, but the less satisfactory plates have been replaced by others from designs by Major Allan Brooks. These, as might be expected, are not only accurate, but are far superior artistically. There are also many useful text cuts to aid the reader in identification.

The letterpress contains just what is wanted in a book of this kind. There is a general account of the literature, so that the beginner can see at a glance where to find the material for deeper study. There is also a useful key, with directions how to use it, while the descriptions of species, though much condensed, are generally adequate for the specific identification of any bird at all likely to occur. The treatment of subspecific forms is naturally sketchy, as it lies outside the scope of a book intended for the beginner. Each bird biography is business-like, clear and judicial, while the economic status of the more prominent forms receives due recognition.

In a comprehensive work like the present there are naturally several points which will require revision in a new edition, and one or two articles are already somewhat out of date, but the Canadian student is heartily to be congratulated on having so reliable a work at his service at so small a cost.

F. C. R. JOURDAIN.

10 APR 1928

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MAY 1,
1928

Vol. XXI.
No. 12.



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BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

EDITED BY H. F. WITHERBY, M.B.E., F.Z.S., M.B.O.U.

ASSISTED BY

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THE OXFORD TRAPPING STATION.

BY

E. M. NICHOLSON AND M. W. WILLSON.

THE Trapping Station of the Oxford Ornithological Society in Christ Church Meadow was opened on November 16th, 1927. The site is a low mound in the centre of the Meadow, which consists of fifty acres of low-lying ground, waterlogged and partially flooded during the winter months, surrounded by avenues of well-grown timber. A reedy dyke, about four yards broad, crosses the Meadow, and it is at the edge of this



THE OXFORD TRAPPING STATION IN CHRIST CHURCH MEADOW.

(Photographed by W. G. H. D. Crouch.)

that the trap is placed in the shelter of an alder, the only considerable tree in the open area. The trap is built on the plans of F. C. Lincoln (*antea*, Vol. XXI., pp. 134-150), and is of the type which he calls the House Trap, with some modifications which will be described later. The cost was about £6. The working is done by certain members of the

Oxford Ornithological Society, who visit it in rotation at about 8 and 11 a.m., 2 p.m., and the hour when the Meadow closes. At the time of writing, the scheme has been in operation only for thirteen weeks, and conclusions must, therefore, be of an extremely tentative nature.

During that period there were found in the trap 250 birds (of thirteen species); 221 of these were ringed, the discrepancy between the two figures being due partly to escapes, partly to the release of certain species before authority for ringing them had been obtained. The numbers ringed weekly were as follows :—

Week (Dates inclusive)	No. Ringed	No. of Re- coveries	Weather	Bait Used
1927				
Nov. 16-27	9	—	Mild	{ Scraps of bread, fish, canary seed, and occasionally grain.
Nov. 23-29	8	—	Mild	
Nov. 30-Dec. 6	22	—	Frosty	
Dec. 7-13	1	—	(Trap closed for repair Dec. 7-11)	
Dec. 14-20	38	1	Very cold	{ (Trap closed till end of vacation)
Dec. 21-23	2	—		
Michaelmas Term 1927	—	—		
	80	1		
	=	=		
1928				
Jan. 24-30	14	2	Mild	{ Grain ; some bread. Bread and grain equally. Pinhead oatmeal ; bread and grain. Pinhead oatmeal and bread.
Jan. 31-Feb. 6	19	8	Mild ; slight frost	
Feb. 7-13	19	10	Mild ; slight frost	
Feb. 14-20	12	6	Mild	
Feb. 21-27	14	6	Mild ; slight frost	
Feb. 28-March 5	23	28	Unsettled ; then fine	
March 6-12	16	20	very cold ; some snow	
March 13-19	24	41	Snow at first ; then fine and warm	
	—	—		
Hilary Term 1928	141	121		
	=	=		

The principal species ringed are the Starling (*Sturnus v. vulgaris*) (ninety-six, of which fifty-four in November to December 1927) ; Greenfinch (*Chloris ch. chloris*) (forty-nine, all in 1928 ; twenty-six during the March period) ; Chaffinch (*Fringilla c. cœlebs*) (thirty-three, all except four during 1928) ; House-Sparrow (*Passer d. domesticus*) (fifteen, all in 1927) ; Reed-Bunting (*Emberiza s. schœnielus*) (eight), and Yellow-Bunting (*E. c. citrinella*) (eight, all in March 1928). Probably the most unusual species taken are the Brambling (*Fringilla montifringilla*), Meadow-Pipit (*Anthus pratensis*) and Jackdaw (*Colinus m. spermologus*), but the occurrence of three Robins (*Erithacus rubecula*) on the first day of working,

and none since, is at any rate psychologically interesting. The column of recoveries enumerates all occurrences of birds previously marked, since the same bird may be retrapped many times. The only species which have so far contracted the "trap habit" to any marked extent are the Greenfinch and the Reed-Bunting. A male Greenfinch, F 6931, ringed on January 31st, returned to the trap no less than twenty-nine times during the period; another fifteen times; another thirteen times in a week. Two male Reed-Buntings have been six times retrapped.

Sexes, wherever distinguishable, are particularly noted, and the proportions of males and females trapped present some points of interest, though the numbers are scarcely large enough to warrant the drawing of any very definite conclusions. Among House-Sparrows, Blackbirds (*Turdus m. merula*) and Great Tits (*Parus m. newtoni*), all taken during November and December, females were in a slight majority. Among Greenfinches, Chaffinches, Yellow-Buntings and Reed-Buntings, the great majority of which were taken during January to March, males were 60 per cent. more numerous than females—in the case of Buntings they were six to one.

It will be noticed that the proportionate numbers of the different species are not constant within the period. The marked falling-off in the number of Starlings, which formed about 70 per cent. of the total for November to December, and only about 30 per cent. for Hilary Term 1928, and the corresponding increase of Finches and Buntings, is to some extent explained by the change in the kind of bait used, but the comparative mildness of the weather has been an important factor. The Starling population of the Meadow finds more than enough to support it in the soft mud. The most successful food during the mild weather has been pinhead oatmeal, which appears to be especially attractive to Greenfinches. These are not among the dominant birds of the Meadow, and appear to come from a distance in order to visit the trap in growing numbers. Their repeated occurrences have made possible some preliminary experiments on their homing ability, a summary of which follows:—

HOMING OF MARKED GREENFINCHES.

Ring No.	Sex	Date of Marking	Date of Removal	Place of Release	Distance and Direction from Trap	Date of Return	Remarks
F. 6931		31.1.28	12.2.28	St. Michael St.	$\frac{1}{2}$ m.N.W.	13.2.28	
Do.		Do.	15.2.28	Radcliffe Inf.	1m.N.	16.2.28	
Do.		Do.	1.3.28	Balliol Quad.	$\frac{1}{2}$ m.N.	3.3.28	
Do.		Do.	9.3.28	Bladon X roads	$6\frac{1}{2}$ m.N.W.	12.3.28	
Do.		Do.	16.3.28	Frilford Heath	$6\frac{1}{2}$ m.S.W.	17.3.28	

Ring No.	Sex	Date of Marking	Date of Removal	Place of Release	Distance and Direction from Trap	Date of Return	Remarks
G. 2708		26.2.28	6.3.28	Farmoor corner	4m.W.	7.3.28	
Do.		Do.	8.3.28	Horton, Otmoor	6½m.N.E.	14.3.28	
Do.		Do.	15.3.28	3 Pigeon's Corner	9m.E.	16.3.28	
G. 2710		Do.	3.3.28	Ewelme Downs	13m.S.E.	—	Not yet re-trapped.
G. 2765		29.2.28	12.3.28	St. John's Garden	½m.N.	14.3.28	
Do.		Do.	15.3.28	Wheatley Bridge	6m.E.	—	Not yet re-trapped
G. 2762		4.3.28	8.3.28	Woodperry	6½m.N.E.	15.3.28	

To comment upon these would obviously be premature ; they are quoted in order to show that either Greenfinches taken haphazard have a remarkable knowledge of many thousand of acres of country, or that they possess and use freely something like a homing sense. Which of the two is involved may be demonstrated partly by releasing birds still farther afield, which we propose to do, and partly by rearing young from the nest and releasing them at a suitable age in order to discover whether they have a similar ability.

The Greenfinch, being a very easy species to keep, we should be grateful if any readers of *British Birds* would act on this suggestion during the spring, and let us know the results of their experiments either with wild birds or controls reared in captivity.

The plans given by F. C. Lincoln were found to need modification in practice. The doors proved far from satisfactory. It can be assumed that birds enter on or near the ground, following the trail of bait, and observation shows that many attempts to escape are made at a higher level. It follows that the upper half of the door, when left ajar in the "set" position, is quite useless for admitting birds and can only serve to let them out. This was remedied by making one of the inner pair on a different pattern, about four inches broader for the upper than for the lower half, the change in breadth being effected simply by a double bend in the outer rod at about thirty inches above the ground. The large single door is open to the objection that it blocks the fairway of birds coming in out of all proportion to its efficiency in preventing them from getting out, once they have succeeded in repassing the inner doors. A method by which this might have been avoided is illustrated by the following ground plan, fig. 1 being Lincoln's arrangement and fig. 2 the proposed alternative.

It has been found advisable to provide several perches inside, since a few birds have dashed themselves about so violently as to cause a cut or bruise above the bill, which is, however, rapidly healed. An attempt to pad the corners

with small-mesh stop-net failed, owing to the impossibility of finding a net in which no bird could entangle itself. Low perches have been fixed in the ground within the surrounding guard-fence, which is about 3 feet high, sloping outwards. This and the box, attached to a corner post, in which rings, pliers, schedules and site-books are kept, is clearly seen in the accompanying picture, which was taken before the new doors and perches were provided.

It must be admitted that the returns have not been, and are unlikely to become, as large as might be expected from private traps worked singly by an equal number of observers. But the co-operative large scale station has many advantages, not the least of which is that it allows people to take part

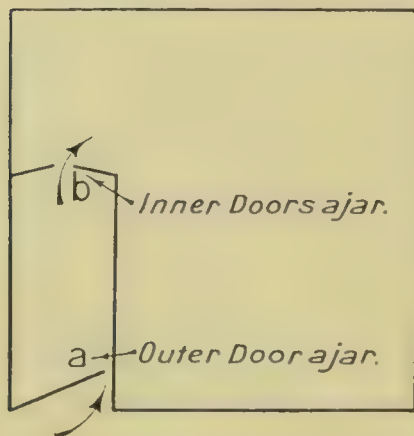


Fig. 1.

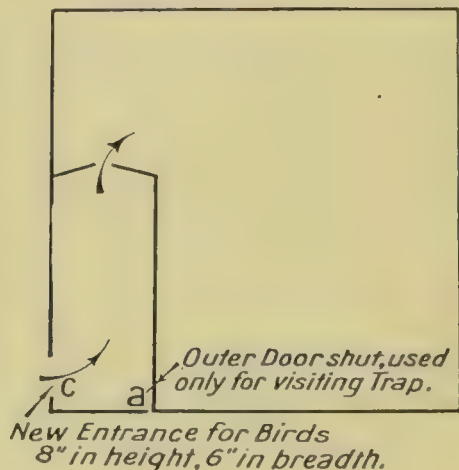


Fig. 2.

GROUND PLAN.

who could not otherwise do any trapping at all, since with ten observers on the rota, the amount of time demanded from each is about an hour and a half every week. Some have already been so far interested as to start private traps of their own, and it is hoped that the trap may become the parent of many others in different parts of the country. These tentative remarks are put forward simply in the hope of inciting other groups of observers to band together for this work, and are in no way final. Apart from the co-operative aspects there are several private observers whose experience of British trapping conditions is much more extensive. In conclusion we should like to record our indebtedness to the Christopher Welch Trustees for the funds out of which the station was built, to the Governing Body of Christ Church, for permission to use the site, and to Mr. J. P. Burkitt, whose excellent advice was responsible for several of the improvements.

RECOVERY OF MARKED BIRDS.*

(Concluded from page 278.)

No.	Place and Date Ringed.	Place and Date Recovered.
TAWNY OWL (<i>Strix a. sylvatica</i>).		
24863	Oakmere (Ches.), 25.4.26, nestling, by A. W. Boyd.	Near Delamere (Ches.), 12.8.27, by F. England.
KESTREL (<i>Falco t. tinnunculus</i>).		
69703	Near Stromness (Orkney), 11.7.27, young, by J. V. Stephens.	Near where ringed, 21.1.28, by J. G. Marwick.
BUZZARD (<i>Buteo b. buteo</i>).		
28959	Lunga Mhor, off Arisaig (Inverness.), 24.6.27, nestling, by W. and A. B. Duncan.	Near Oban (Argyll.), mid- Oct., 1927, by D. Campbell.
COMMON HERON (<i>Ardea c. cinerea</i>).		
104090	Floriston (Cumb.), 30.4.27, nestling, by R. H. Brown.	Aspatria (Cumb.), 29.6.27, by E. Midwinter.
104753	Boreham (Essex), 21.4.27, young, by M. Davies, for Col. G. P. Pollitt.	Near Whitchurch (Hants.), 23.2.28, by Sir W. Portal.
104756	Ditto	ditto. Near Thame (Oxford.), mid- Sept., 1927, by J. Connor.
104160	Otmoor (Oxford.), 19.5.27, young, by A. K. Gibbon, for Oxford Orn. Soc.	Near Weston-super-Mare (Somerset), 17.12.27, by H. E. Cole.
103285	Almond bank (Perth.), 6.6.27, nestling, by H. Zimmerman for Lord Scone.	Isle of Skye (Inverness.), 12.9.27, by D. Campbell.
BITTERN (<i>Botaurus s. stellaris</i>).		
101203	Norfolk, 27.5.27.	Kessingland (Suffolk), Aug., 1927.
MALLARD (<i>Anas p. platyrhynchos</i>).		
3 birds	Prestbury (Ches.), June and Aug., 1926 (hand-reared from Cheshire eggs), by R. M. Garnett.	Where ringed, Sept. and Oct., 1926, by ringer.
46 birds	Ditto	29.5.27. Ditto, Aug., Sept., Oct., 1927.
24236	Ditto	ditto. Near where ringed, 8.10.27, by Capt. A. S. Pearse.
TEAL (<i>Anas c. crecca</i>).		
71692	Longtown (Cumb.), 31.3.23, ad., by Sir R. J. Graham.	Kolasens (Jemtland), Sweden, May, 1927, by Herr J. O. Wallin, per F. W. Watkyn- Thomas.
70430	Ditto	7.4.23. Delta of North Dvina, about 18 kil. from Archangel, Russia, 21.5.27, by P. P. Sushkin.

* Correction.—Blackbird, *antea*, p. 276, No. Y.5702, date of ringing should be 27.6.26, not 27.6.27.

No.	Place and Date Ringed.	Place and Date Recovered.
TEAL (<i>contd.</i>).		
76158	Longtown (Cumb.), 3.3.25. ad., by Sir R. J. Graham.	Lake Värnern (Varmland), Sweden, 3.9.27, by Einar Lonnberg.
76445	Ditto 25.8.25.	Between Alloa and Stirling, 5.1.28, by J. H. Haines.
78326	Ditto 14.10.25.	Dalmellington (Ayr.), 2.1.28, by A. B. Money Coutts.
78496	Ditto 27.2.26.	Glasson (Cumb.), 17.12.27, by R. S. Forsyth.
78513	Ditto 5.3.26.	Near Muncaster Castle (Cumb.), 15.9.27, by W. Marchant.
RR.1149	Baugh, Tiree (Argyll), 14.6.27, young, for Col. G. P. Pollitt.	Where ringed, 25.10.27, by C. Macdonald.

WIGEON (*Anas penelope*).

36823	Longtown (Cumb.), 4.9.20, young (hand-reared), by T. L. Johnston.	River Ijma (lat.64.5, long.57), N.E. Russia, 27.5.26, by W. Woulfertt (see B.B., XXI., p. 98).
-------	-------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------

CORMORANT (*Phalacrocorax c. carbo*).

104342	Badcall Islands (Suther- land), 24.6.26, nestling, by E. C. Sharp.	Island of Coll (Argyll), 18.11.27, by D. J. Campbell.
--------	--------------------------------------------------------------------------	----------------------------------------------------------

SHAG (*Phalacrocorax a. aristotelis*).

102836	Handa (Sutherland), 25.6.23, nestling, by A. W. Boyd.	Where ringed, 24.6.27, by E. C. Sharp.
104297	Ditto, ad., 18.6.26, by E. C. Sharp.	Ditto ditto.
104689	Edrachillis Bay (Suther- land), 6.7.27, nestling, by W. and A. B. Duncan.	Island of Soay, by Mallaig (Inverness.), 11.2.28, by R. M. McDonald.
101300	Ditto ditto.	Lochcarron (Ross.), 14.9.27, by D. MacLean and J. Stewart.
101420	Ditto ditto.	Loch Fad Dam, Rothesay (Bute), Feb., 1928, by W. H. Constable.
101296	Ditto ditto.	Near Cummertrees, Annan (Dumfries.), 8.11.27, by J. Nicholson.
101410	Ditto ditto.	Lake Windermere (Westmor- land), 1.12.27, by R. Cole.
101409	Ditto ditto.	S. Uist. (Outer Hebrides), 16.9.27, by N. McInnes.
101295	Ditto ditto.	N. Uist. (O. Hebrides), 14.10.27, by A. Ferguson.
101282	Ditto ditto.	Harris (O. Hebrides), 11.1.28, by J. D. Disher.
101406	Ditto ditto.	Lewis (O. Hebrides), 13.1.28, by N. Morrison.

No.	Place and Date Ringed.	Place and Date Recovered.
SHAG (<i>contd.</i>).		
101291	Edrachillis Bay (Sutherland), 6.7.27, nestling, by W. and A. B. Duncan.	Lough Neagh, Ireland, 24.11.27, by E. Castles.
104678	Ditto ditto.	River Bann (Armagh), Ireland, 3.1.28; dead some weeks, by F. Jordan.
102107	Lunga, Treshnish Isles (Argyll.), 12.7.27, nestling, by W. and A. B. Duncan.	Off Glenelg (Inverness.), 5.9.27, by P. Mann.
101105	Ditto ditto.	Mallaig (Inverness.), 7.10.27, by H. McLellan.
100899	Ditto ditto.	Ditto, 22.10.27, by C. Foster.
101421	Ditto 7.6.27.	Sound of Arisaig (Inverness.), 17.8.27, by J. M. Shewell.
102101	Ditto 12.7.27.	Arisaig, 28.12.27, by H. MacDonald, per J. Ritchie.
100876	Ditto ditto.	Lochbroom (Ross.), 19.12.27, by J. MacLeod.
101874	Ditto ditto.	Isle of Mull, 1.2.28, by A. Fletcher.
102117	Ditto 12.7.27.	Ditto, early Sept., 1927, by D. McLean.
101112	Ditto ditto.	Near Isle of Mull, 1.10.27, by J. G. Robertson.
101875	Ditto 13.7.27.	Tirree (Argyll.), 21.1.28, by A. McLean.
101869	Ditto ditto.	Tirree, 30.11.27, by D. A. McDonald.
100884	Ditto ditto.	Island of Coll (Argyll.), 12.12.27, by H. Macfadyen.
101860	Ditto ditto.	Isle of Harris (O. Hebrides), 18.1.28, by J. Lowe.
101853	Ditto ditto.	Isle of Barra (O. Hebrides), 19.9.27, by M. MacDonald.
101855	Ditto ditto.	Ditto, 8.10.27, by J. McNeil.
101448	Ditto 7.6.27.	Ditto, 19.12.27, by M. MacDonald.
103446	Isle of Islay (Argyll.), 3.7.27, nestling, by T. Kerr	Near Mull, Jan., 1928, by A. M. McKenzie.
104184	Tintagel (Cornwall), 25.7.27, nestling, by J. M. and P. K. Chance.	Looe (Cornwall), 14.10.27, by H. Hocking.
GANNET (<i>Sula bassana</i>).		
104806	Bass Rock, Scotland, June, 1927, young, by H. W. Robinson.	Udny (Aberdeen), Oct., 1927, by Mrs. Gibb.
104884	Ditto Aug., 1927.	Dalmeny (W. Lothian), 19.10.27, by A. G. Schaw Miller. Bird in Edinburgh Mus.
101151	Ditto July, 1926.	Hourdel (Baie de Somme), France, 17.11.27, by A. Labitte.

No.	Place and Date Ringed.	Place and Date Recovered.
GANNET (<i>contd.</i>).		
101192	Bass Rock, Scotland, July, 1926, young, by H. W. Robinson.	Aljesur (Algarve), Portugal, Dec., 1927, by J. Amado da Cunha.
104892	Ditto Aug., 1927.	Near Struten lighthouse, Oslo fjord, Norway, 4.11.27, by S. Istre.

WOOD-PIGEON (*Columba p. palumbus*).

65320	Torrance (Stirling), 4.6.20, young, by J. Bartholomew.	Where ringed, 13.9.27, by ringer.
74964	Ditto 2.5.25.	Near where ringed, 17.2.28, by T. A. White.
74503	Scone Estate (Perth.), 5.5.24, nestling, Lord Scone.	Ditto, 9.4.27, by ringer.
77642	Ditto 8.5.26.	Ditto, 17.10.27.
RR.1072	Ditto 8.5.27.	St. Andrews (Fife.), Jan., 1928, by A. Aitchison.
79370	Meigle (Perth.), 16.5.26, young, by C. W. Walker.	Coupar Angus (Perth.), 15.12.27, by A. Watt.
74418	Kirkmahoe (Dumfries.), 19.4.27, nestling, by W. and A. B. Duncan.	Near Castle Douglas (Kirkcudbright,) 18.12.27, by W. M. Russell.

TURTLE-DOVE (*Streptopelia t. turtur*).

RR.4405 (73708)	Near Gt. Budworth (Ches.), 8.7.25, ad., by A. W. Boyd.	June, Aug., 1926; June, twice July, 1927.
10 birds	Holmwood (Surrey), June and July, 1926, ads., by H. B. P. Kingham.	Where ringed, June and July, 1927, by ringer.

LAPWING (*Vanellus vanellus*).

Z.4931	Torrance (Stirling.), 5.6.24, young, by J. Bartholomew.	Inagh, Ennis (Clare), Ireland, 18.11.27, by M. Flynn.
W.9862	Ditto 6.6.27.	Tralee (Kerry), Ireland, 21.12.27, by P. Hanafin.
96000	Ditto 13.6.20.	Bodmin (Cornwall), late Dec., 1927, by W. J. Old.
Y.7602	Ditto 29.5.25.	Helston (Cornwall), 13.1.28, by G. Nicholas.
Y.3429	Ditto 28.5.25.	Loirac, Medoc (Gironde), France, 22.12.27, by G. Grenoilleau.
58912	Ditto 22.6.23.	Near Echevarria (Biscay), Spain, 2.1.28, by J. Innes and A. A. Chalke.
Z.1222	Killearn (Stirling.), 11.6.23, young, by P. C. Macfarlane.	Newcastle West (Limerick), Ireland, 12.1.28, by S. Geary.

No.	Place and Date Ringed.	Place and Date Recovered.
LAPWING (<i>contd.</i>).		
Z.4096	Hareshawmuir (Ayr.), 23.5.24, young, by E. R. Paton.	Ballynacargy (Westmeath), Ireland, 2.1.28, by W. Masterson.
Z.1158	Glen Clova (Forfar.), 25.6.24, young, by J. N. D. and T. L. Smith.	Moneymore (Derry), Ireland, 26.12.27, by J. McOscar.
N.3486	Ditto, 7.6.26, by T. L. Smith.	Newtownards (Down), Ire- land, 19.12.27, by W. Plun- kett.
Z.5543	Kilmacolm (Renfrew.), 26.6.26, nestling, by Mr. and Mrs. Blyth.	Greenock (Renfrew.), 18.9.27, by M. McGilp.
51377	Ditto 26.5.23.	Nenagh (Tipperary), Ireland, 13.11.27, by E. N. Denitt.
Z.9276	Macclesfield (Ches.), 19.6.27, nestling, by R. E. Know- les.	Near Abbeyfeale (Limerick), Ireland, 22.12.27, by C. S. S. Ellison.
W.9701	Kilmarnoch (Dumbarton.), 29.5.27, young, by T. Kerr.	Bruff (Limerick), Ireland, 26.11.27, by B. Sheehan.
W.8474	Near Beaulieu (Hants.), 15.6.27, young, by Miss and Mr. Chance.	St. Servan (Ille et Vilaine), France, 1.1.28, by M. Ber- land.
99039	Styal (Ches.), 14.6.27, nestling, by Miss M. H. Greg.	Carmargue (Bouches du Rhône), France, 28.12.27, by P. Manson.
V.5228	Ullswater (Westmorland), June 1927, young, by H. J. Moon.	Near where ringed, early Sept., 1927, by J. Clark.
V.7005	Ingleton (Yorks.), July, 1927, ditto.	Monard (Tipperary), Ireland, 26.12.27, by W. O'Neill.
N.5046	Ullswater (Cumb.), May, 1926, ditto.	Bonavista, Newfoundland, 27.12.27, by A. G. Bayley.
W.6761	Penrith (Cumb.), May, 1927.	Canton de Navarreux (Basses- Pyrénées), France, 6.11.27, by B. Lacoste.
V.5341	Ditto June, 1927.	Near Coimbra, Portugal, 4.1.28, by M. F. Gomez.
W.4884	Penybont (Radnor.), 5.5.27, nestling, by P. E. A. Morshead.	Barcarrota (Badajoz), Spain, 2.2.28, by M. Ortega.
N.0145	Ulverston (Lancs.), 3.6.27, young, by H. S. Greg.	Near La Rochelle (Charente Inf.), France, Dec., 1927, by A. M. Robertson.
Y.6812	Scone Estate (Perth.), 13.6.25, nestling, by D. McClure for Lord Scone.	Callan (Kilkenny), Ireland, Dec., 1927, by P. Morris.
W.1278	Ditto 28.5.27.	Near Moyard (Galway), Ire- land, late Dec., 1927, by H. F. G. Irwin.
W.2512	Greystoke (Cumb.), 8.6.27, young, by Miss L. W. Streatfield.	Bruff (Limerick), Ireland, 27.1.28, by W. Hogan.

No.	Place and Date Ringed.	Place and Date Recovered.
REDSHANK (<i>Tringa t. totanus</i>).		
X.3644	Near Otterburn (North-umb.), 16.6.26, nestling, by Miss and Mr. Chance.	Yarmouth, Isle of Wight, 21.12.27, by F. H. K. Marshall.
W.9251	Littlebourne (Kent), 18.5.27, young, by M. W. Humphreys, for St. Edmund's N. H. Soc.	Milton, Portsmouth (Hants), Jan., 1928, by W. J. Atkins.
CURLEW (<i>Numenius a. arquata</i>).		
28026	Lann (Dumfries.), 3.6.22, young, by J. Murray for H. S. Gladstone.	Drum (Sligo), Ireland, 29.2.28, by J. McCullagh.
25683	Penrith (Cumb.), June, 1927, young, by H. J. Moon.	Tyrone (Ulster), Ireland, 11.11.27, by W. Simpson.
SNIPE (<i>Capella g. gallinago</i>).		
W.2000	Ulverston (Lancs.), 24.5.27, young, by H. S. Greg.	Cark-in-Cartmel (Lancs.), 26.11.27, by W. Wilson.
WOODCOCK (<i>Scolopax r. rusticola</i>).		
X.9204	Meigle (Perth.), 11.6.26, 11.6.26, young, by C. W. Walker.	Near Mauchline (Ayr.), 14.10.27, by J. Macmillan.
X.4303	Scone Estate (Perth.), 19.5.26, young, by A. McInnes for Lord Scone.	Luncarty (Perth.), 26.10.27, by J. S. Shiel per <i>The Field</i> .
W.1282	Ditto, 20.4.27, by D. McClure, for Lord Scone.	Fermoy (Cork), Ireland, 20.2.28, by Mr. Devonshire per R. E. Russell.
W.7232	Ditto 10.5.27.	Near Sligo, Ireland, 7.2.28, by A. A. Perceval.
W.8681	Witton-le-Wear (Lancs.), 15.6.27, young, for G. P. Pollitt.	Where ringed, 1.12.27, by J. M. Thorman.
W.5946	Cartmel (Lancs.), 29.4.27, young, for A. Porritt.	Grange-over-Sands (Lancs.), 1.2.28, by <i>Shooting Times</i> .
W.6006	Holker (Lancs.), 2.5.27 ditto.	Where ringed, 2.12.27, by ringer.
Z.3076	Ditto May, 1925.	Near where ringed, 24.11.27, by ringer.
X.6173	Witherslack (Lancs.), May, 1927, young, by H. W. Robinson.	Where ringed, 20.9.27, by A. Machell.
60352	Annan (Dumfries.), 8.6.27, young, by B. H. Fell for A. H. Greg.	Near where ringed, 12.9.27, J. A. Sperling.
Y.1698	Hetland (Dumfries.), 17.7.27, ditto.	Ditto, late November, 1927, by J. S. Keress per Lord Scone.
SANDWICH TERN (<i>Sterna s. sandvicensis</i>).		
Z.8821	Scolt Head (Norfolk), 17.6.25, young, by Miss E. L. Turner.	Esmoriz, near Oporto, Portugal, 5.10.27, by A. A. Cunha.

No.	Place and Date Ringed.	Place and Date Recovered.
COMMON GULL (<i>Larus c. canus</i>).		
28448	Tiree (Argyll.), 18.6.27, young, by L. Fraser for G. P. Pollitt.	Oban (Argyll.), Jan., 1928, by D. Tyson.

HERRING-GULL (<i>Larus a. argentatus</i>).		
27696	Badcall Islands (Sutherland.), 22.6.27, nestling, by Miss E. C. Sharp.	Ringford (Kircudbright.), 11.1.28, by T. Coates.

BRITISH LESSER BLACK-BACKED GULL (*Larus f. affinis*).

24562	Isles of Scilly (Cornwall), 8.7.24, young, by H. W. Robinson.	Guilvinec (Finistère), France, June, 1927, by R. Bommier.
26497	Foulshaw (Westmorland), 7.7.27, ditto.	Near Leixoes Harbour, Por- tugal, 3.10.27, by J. R. de Pinho.
26576	Ditto 19.7.27.	Gijón (Asturias), N. Spain, 28.10.27, by R. Martinez.

KITTIWAKE (*Rissa t. tridactyla*).

70450	Farne Islands (Northumb.), 30.6.24, young, by Mrs. T. E. Hodgkin.	Grosswater Bay, Hamilton Inlet, Labrador, 28.10.25, by G. Budgell. (See <i>B.B.</i> , Vol. XX., p. 204.)
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RAZORBILL (*Alca torda*).

63990	Handa Island (Sutherland), 25.6.23, ad., by A. W. Boyd.	Where ringed, 24.6.27, by Miss E. C. Sharp; re- ringed 27690.
RR.2424	Bulgach Island (Suther- land), 7.7.27, nestling, by W. and A. B. Duncan.	Oslofjord, Norway, 16.10.27, by J. Haugom.

MOOR-HEN (*Gallinula ch. chloropus*).

RR.237	Cumdivock (Cumb.), 19.7.26, nestling, by R. H. Brown.	Near where ringed, 25.6.27, by ringer.
27306	Torrance (Stirling.), 3.9.27, ad., by J. Bartholomew.	Stewartstown (Tyrone), Ire- land, 26.11.27, by J. H. Hughes.

BIRDS MARKED ABROAD AND RECOVERED IN BRITISH ISLES.

No.	Place and Date Ringed.	Place and Date Recovered.
STARLING (<i>Sturnus v. vulgaris</i>).		
Mus. Goteborg, Sweden. B.3436	Sandhem, 30 kilometres N.W. of Jönköping, Swed- en, 16.6.26.	Leicester, 1.1.28, by W. E. Mayes.
Vogelwarte, Rossitten, Germania. 46644	Rossitten, 16.7.27.	Near Beer (Devon.), 29.12.27, by H. R. Dawe.

No.	Place and Date Ringed.	Place and Date Recovered.
BLACKBIRD (<i>Turdus m. merula</i>).		
P. Skovgaard, Viborg, Danmark. 8189 H	Near Copenhagen, Den- mark, 27.6.27, young.	Near Nottingham, 30.1.28, by W. E. Lyon, per <i>Daily Mail</i> .
MALLARD (<i>Anas platyrhyncha</i>).		
Leningrad, Lesnov Instit. D.437	Lake Luberetzkoie, near Novgorod, Russia, 25.7.26.	Silsoe (Beds.), 31.1.27, by H. S. Gladstone. Pub- lished in <i>The Field</i> .
LAPWING (<i>Vanellus vanellus</i>).		
Mus. Zool. Helsingfors, Finland. C.1603	Near Björneborg, S. Fin- land, 27.6.27.	Near Irvinestown (Ferma- nagh), Ireland, 8.10.27, by Hunter & Son, per <i>Shooting Times</i> .
CURLEW (<i>Numenius a. arquata</i>).		
Mus. Goteborg, Sweden. D.1869	Öland, Baltic, 24.6.26.	Near Carrick-on-Shannon (Leitrim), Ireland, 12.2.27, by G. C. Low and A. W. Gillman. Pub- lished in <i>The Times</i> .
WOODCOCK (<i>Scolopax r. rusticola</i>).		
Mus. Stockholm. A.589	Near Jönköping, Sweden, 25.5.25, young.	Near Birmingham (War- wick.), Dec., 1927, by <i>Shooting Times</i> .
BLACK-HEADED GULL (<i>Larus r. ridibundus</i>).		
Vogelwarte, Rossitten, Germania.	Riems Island, Pomerania, 7.4.25.	Portsmouth (Hants.), Sept., 1927, by W. J. Atkins.
P. Skovgaard, Viborg, Danmark X.P.3114	Lake Ove, N.W. Jutland, 1.6.27, young.	Near Southport (Lancs.), 24.12.27, by F. W. Hold- er.
Ditto X.3807	Isle of Vröj, Great Belt (Baltic), 6.7.27.	Weston-super-Mare (Som- erset), Dec., 1927, by R. Kemp.
COMMON GULL (<i>Larus c. canus</i>).		
P. Skovgaard, Viborg, Danmark. X.5245	Hjaelm Island, east of Aarhus, Denmark, July, 1925.	St. James's Park, London, 16.2.27, by Sir Lionel Earle and W. St. John Fox.
Mus. Goteborg, Sweden. D.2162	Island of Tylon, Sweden, July, 1926.	Cliffe-at-Hoo (Kent), Oct., 1926, by E. Smith per G. J. Scholey.
Ditto C.2216	Öland, Baltic, 19.6.24.	Cheltenham (Glos.), 10.2.26, by L. J. Vernall.
Ditto D.3662	Ditto 4.7.27.	Near Maryport (Cumb.), 29.1.28, by M. Kitchin.

NOTES

COMMON AND ROUGH-LEGGED BUZZARDS AND PEREGRINE FALCONS IN HAMPSHIRE.

On May 22nd, 1927, I saw a Common Buzzard (*Buteo buteo*) in north Hampshire on the borders of Berkshire. I subsequently observed this bird on several occasions during the summer. It is most unusual for Buzzards to occur here during the summer months.

On December 18th, 1927, I observed a fine Rough-legged Buzzard (*Buteo lagopus*) on the hills in the same district. These birds occur as regular winter visitors to this district, though the past winter has produced fewer than usual.

Several Peregrines (*Falco peregrinus*) have been reported during the past winter months. The last observed was seen on February 12th, 1928, playing with a Kestrel (*F. tinnunculus*), which it subsequently struck down and killed. Peregrines are regular winter visitors here.

D. A. PHILLIPS.

EARLY NESTING OF SHAG IN DONEGAL.

On March 20th, 1927, Mr. C. B. Horsburgh reports having seen two Shags (*Phalacrocorax a. aristotelis*) sitting on nests, containing one egg each, on the north-west coast of Donegal. This is by far the earliest record of nesting which I have had for Ireland.

C. V. STONEY.

[Although the above record constitutes the earliest Irish record, it is remarkable that in the Orkneys eggs have been found as early as February 24th. On the south Devon coast I have seen birds which refused to leave their nests as early as March 3rd, but have no proof that they contained eggs at that date, as all the nests examined were only partially built (*cf. B.Br.*, VII., pp. 96-99).—F.C.R.J.]

KILDEER PLOVER IN CO. DUBLIN.

A MALE example in adult plumage of the Kildeer Plover (*Charadrius vociferus*) was shot on January 12th, 1928, at Naul, Balbriggan, co. Dublin. The bird was first observed running about a grass field in the company of Thrushes. The owner of the land, noticing that it was a strange bird, shot it and sent it to me for identification. It was also seen in the flesh by Mr. C. B. Moffat. This is the first recorded occurrence of this American species in Ireland.

W. J. WILLIAMS.

BLACK GUILLEMOT IN DEVON.

On March 4th, 1928, I saw from Dawlish Warren a Black Guillemot (*Uria grylle*), a bird that is very rarely seen in these

parts. The tide was fortunately high, and the bird was so close in that, though when I first saw it I not unnaturally thought it was a badly oiled Common Guillemot, as soon as I got my glasses on to it I could see there was no oil whatever on the bird, and that it was a Black Guillemot, apparently in complete summer plumage. The large white patch on the wing was very distinct and the small size of the bird most noticeable.

ERNEST ALLEN.

ALBINO RED-NECKED GREBE IN LINCOLNSHIRE.—With reference to the note on this subject (*antea*, p. 264) several correspondents have pointed out that a previous British-taken albino of this species is mentioned in the fourth edition of "Yarrell," Vol. IV., p. 127, as having been taken near Beachy Head in 1879.

LETTER.

DECREASE OF BLACK GAME IN SCOTLAND.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the note on this subject (*antea*, pp. 206–7) I have had occasion to observe on some moors in Holstein, north Germany, that Black Grouse are extremely susceptible to changes in their environment. During a period of fuel scarcity the moors in question were more rigorously exploited for peat fuel than ordinarily, and a good deal of noisy machinery and many people were employed for this purpose. This caused the Black Grouse to leave these moors, where till then they had been plentiful, and they must have wandered far, as the stock on quieter moors in the neighbourhood was not increased by their numbers.

That Forestry Commissioners in Scotland advocate the extermination of Black Game strikes one as a very rigorous and short-sighted measure.

In Germany, where afforestation is practised to a considerable extent, the Authorities on Afforestation do not regard Black Game as sufficiently harmful to order its persecution, especially as they are known to feed principally on moorland plants and buds of trees like birches, etc., as also on insects, snails and grubs. Moreover, they prefer living on the open moors and do not much fancy plantations.

DUBLIN.

R. T. FRETWELL.

REVIEWS.

The Baby Bird and its Problems. By W. Bickerton, pp. xvi., 136.

With 96 illustrations from photographs, (Methuen.) 10s. 6d. net.

THIS is a statement of the principal facts concerning the early life of our common birds, written in a popular style, and well suited to stimulate the interest of a beginner. The claim of the author in the preface, that while approaching the subject from a somewhat unusual angle he is interpreting the simple observations of the field naturalist in the light of the principles of elementary biology, is perhaps rather an overstatement, for generally the author is content to describe the facts without investigating the underlying causes.

Greater accuracy in matters of detail would have added considerably to the value of the work. Thus, on p. 28, a table is given of the incubation-periods of some eighteen of our commoner birds. These periods

are extremely difficult to ascertain exactly, and in many cases there are still unexplained discrepancies in the recorded observations. There is, however, no excuse for the quite erroneous statement defining the incubation-period of the Sparrowhawk as twenty days! It has long been known to last for about five weeks, and the painstaking observations of Mr. J. H. Owen have fixed it definitely at from thirty-four to thirty-five days. Some of the other periods are not correctly given: that of the Tawny Owl is certainly under-estimated.

Tables showing the comparative sizes of birds taken by measurements of length must always be deceptive, as so much depends on the size of the rectrices. No one would maintain that the Long-tailed Tit is a larger bird than the Reed-Warbler, in spite of the fact that Saunders's measurements of the former exceed those of the latter. In the discussion on the comparative size of the Cuckoo and its fosterers, probably a truer idea of the proportions would be given by their respective weights.

The Roseate Tern is said to have long been on the verge of extinction as one of our native species, only continuing to exist in any strength in one or two strictly protected areas. This is quite the reverse of the truth. The Roseate Tern exists, as it has done from time immemorial, in considerable numbers, but it has practically disappeared from what was formerly its main stronghold under strict and indiscriminating protection, though it survives in unprotected areas.

Apart from these and other imperfections in detail, the book is interesting and readable, while the illustrations, though somewhat unequal in merit, testify to much persevering field work on the part of the writer.

F. C. R. JOURDAIN.

Birds at the Nest. By Douglas Dewar, 8vo, pp. 272. (Lane.) 7s. 6d. net.

Although the subject of this work is much the same as that of Mr. Bickerton's book the treatment is totally different. It is a serious contribution to the study of bird mentality, but in his zeal to dispel the prevailing misconceptions on the subject, in which the bird is regarded as sharing in the intelligence and feelings of mankind, the author has gone to the opposite extreme and pictures the bird as a mere automaton, controlled by instinct and entirely devoid of intelligence. While admitting that there is a certain amount of truth in this contention, the theory is pushed much too far. The differences in degree of intelligence between different species are insufficiently recognized and far too much reliance has been placed on a series of observations from different sources of the behaviour of birds kept under totally unnatural conditions in captivity. "In aviaries instances of ill-treatment, neglect, and even murder of the young frequently occur." No doubt, and when human beings have been imprisoned under somewhat analogous conditions, similar results have ensued, but this proves little or nothing. In a wild state there are species in which the male hardly ever comes into contact with the young. Is it surprising that disaster follows when both sexes are kept together in confinement? Among many mammals, seclusion from the female is absolutely necessary at the time of reproduction, and the interference of man leads to what in a human being might be described as a "brain storm" or temporary insanity. Even in the case of wild birds the same result may be produced by incessant interference. In more than one instance, Ravens, pestered by the attentions of a photographer, have devoured their own eggs, yet this conduct is quite abnormal and could never take place under natural conditions.

The Raven which deserted a threatened nesting-site was probably disturbed by the preliminary falls of loose stones, and there is no need to credit it with an acquaintance with the laws of mechanics any more

than to suppose that the bird which springs to sudden flight at the report of a gun has any knowledge of the laws of ballistics or the explosive properties of powder, but it does sense the presence of danger, and adopts the instinctive method of flight. The "broken wing" trick is the subject of a chapter in which, after quoting descriptions and explanations from many sources, the author comes to the conclusion that the movements in question are purely involuntary and are caused by the partial paralysis due to intense excitement. Mr. Dewar is more familiar with Indian than European birds and here his ignorance has led him into error. "Few, if any, individual birds can, while they have young, be surprised by a human being or a four-footed creature sufficiently often to have the opportunity of observing the effect of such behaviour." A very slight acquaintance with the Arctic Skua would have disproved this assertion. That the movements in question are to some extent under the control of the bird is shown not so much by the fact that they increase or diminish in energy as the intruder approaches or recedes from the nest, but rather because directly the bird realises that the nest has been found it abandons the attempt to distract the attention of its foe. Mr. Dewar has also failed to grasp the significance of the change of demeanour on the part of the male Ostrich when he finds the stranger between himself and the nest. Attack at such a moment might result in the destruction of the eggs. That the habit of running in an apparently helpless condition away from the nest is advantageous to certain species receives the strongest confirmation from observations made of predaceous mammals in pursuit of apparently injured birds.

An unfortunate characteristic of this work is the carelessness with regard to quotations. On p. 74, St. John is quoted as recording the breeding of a small Bearded Tit "in a chink of his garden wall in Sutherland." In the tables of percentages of rejections by fosterers of the Cuckoo, the average of the Whitethroat is given as 80 per cent. Only ten cases of rejection were known to Barfod out of hundreds of instances of parasitism, and the proportion is probably nearer five than 80 per cent. Proper names are treated in the most cavalier way. Walter becomes Walker; Barfod, Barford; Aplin, Alpin; Meyrick, Merrick; Voigt, Voight, etc.

We are told (p. 78) that Crows are attacked by some of the larger Owls, but as these are nocturnal in their habits, "the Crows are probably not aware of their existence." If Mr. Dewar had seen, as I have, an Eagle-Owl surrounded by a cloud of furious, shrieking Hooded Crows he would not be under any delusion as to the views of the Crows on the subject of Eagle-Owls. It is surprising to find a general rule enunciated that the parental instinct is stronger in the female than the males, without any reference to the exceptions in the case of the Limicolæ and other families. An instance in which a hen Golden Plover left incubation to her mate is ascribed to extraordinary individual timidity.

The book is not convincing because the author's attitude is not judicial. All evidence which tells in favour of his views from sources good, bad and indifferent is admitted, but the evidence on the opposite side is dismissed as incredible, without investigation. Mr. Dewar is of course much nearer the truth than the writers of the anthropomorphic bird and mammal literature of the present day, but those who have studied and kept birds, more especially the higher Passeres and especially the Corvidæ, know that they are capable of real affection, and show powers of intelligence far beyond what he is prepared to allow them.

F. C. R. JOURDAIN.

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